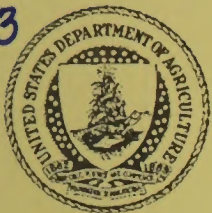


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United States  
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Foreign  
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Circular Series  
WAP 8 - 89  
AUGUST 1989

# World Agricultural Production

## Inside This Issue....

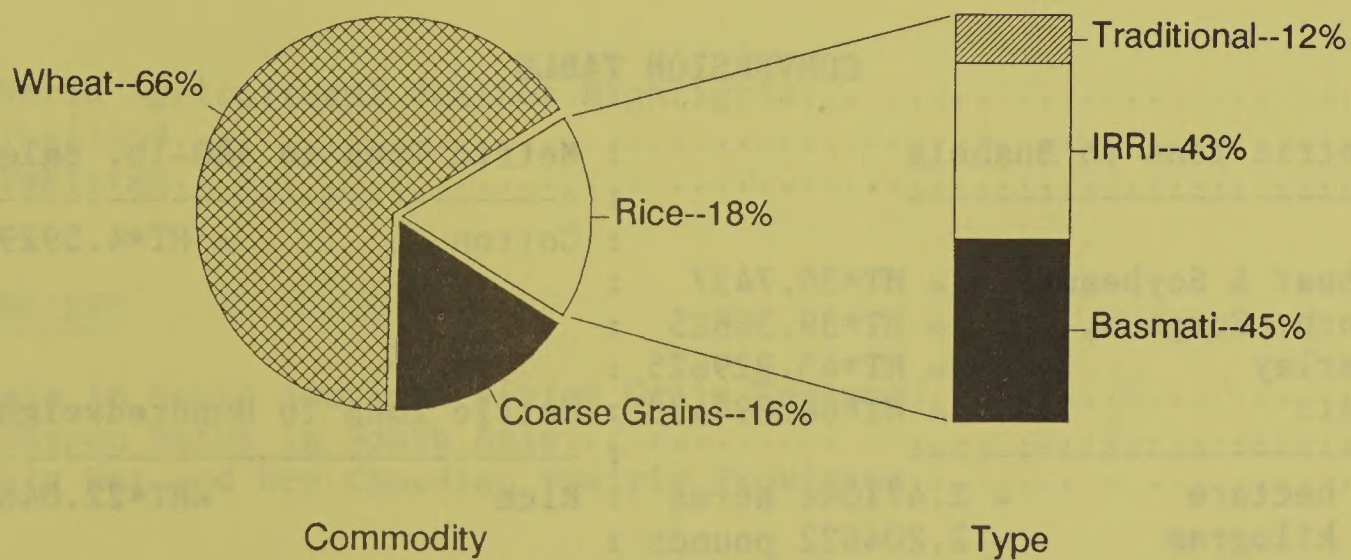
USSR Oilseed Production

World Poultry Production

Pakistan Grain Production

### PAKISTAN GRAIN AREA

1989/90 PERCENTAGES



This report draws on information from USDA's global network of agricultural attaches and counselors, official statistics of foreign governments, other foreign source materials, and results of office analysis. Estimates of U.S. acreage, yield, and production are from USDA's Agricultural Statistics Board, except where noted. All numbers in this report are based on unrounded data and detail may not add to totals because of rounding. This report reflects official USDA estimates released in World Agricultural Supply and Demand Estimates (WASDE-233), August 10, 1989.

This report was prepared by the Foreign Production Estimates Division (FPED), FAS/USDA, Washington, D.C. 20250. Further information may be obtained by writing to the division or by calling (202) 382-8888.

\*\*\*\*\*  
 \* The next issue of World Agricultural Production will be released at 3 p.m. \*  
 \* eastern time on September 13, 1989. \*  
 \*\*\*\*\*

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:			:
:	CONVERSION TABLE		:
:			:
:			:
:	Metric Tons to Bushels	:	Metric Tons to 480-lb. Bales
:	-----	:	-----
:		:	Cotton = MT*4.592917
:	Wheat & Soybeans = MT*36.7437	:	
:	Corn, Sorghum, Rye = MT*39.36825	:	
:	Barley = MT*45.929625	:	
:	Oats = MT*68.894438	:	Metric Tons to Hundredweight
:	-----	:	-----
:	1 hectare = 2.471044 acres	:	Rice = MT*22.04622
:	1 kilogram = 2.204622 pounds	:	
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## PRODUCTION HIGHLIGHTS FOR 1989/90

**WHEAT:** World production for 1989/90 is estimated at 527.0 million metric tons, down 6.4 million or 1 percent from last month, but up 5 percent from last year's harvest. Important changes from last month include the following:

- o United States Production is estimated at 55.6 million tons, down 2.0 million or 3 percent from last month, but up 13 percent from last year. The decrease is due to lower estimated area and yield for spring wheat.
- o USSR Production is estimated at 87.0 million tons, down 4.5 million or 5 percent from last month, but up 3 percent from 1988. The decline is attributed to lower estimated area and yield.
- o Canada Production is estimated at 24.0 million tons, down 2.0 million or 8 percent from last month, but up 53 percent from last year. Hot weather in Manitoba and Saskatchewan has reduced yield estimates for spring-planted wheat.
- o India Production is estimated at a record 51.0 million tons, up 1.0 million or 2 percent from last month and up 13 percent from last year. The increased production is attributed to higher yields resulting from prolonged, cool winter conditions and dry harvest weather.
- o Argentina Production is estimated at 11.0 million tons, up 0.5 million or 5 percent from last month and up 41 percent from last year. Favorable weather during planting has led to higher estimated area and yield.
- o East Europe Production is estimated at 41.5 million tons, up 0.4 million or 1 percent from last month, but down 8 percent from 1988. Yield prospects in Hungary are estimated higher due to timely rains during grain-fill.
- o Brazil Production is estimated at 4.8 million tons, up 0.3 million or 7 percent from last month, but down 17 percent from last year. The increase is due to higher estimated area.

**COARSE GRAINS:** World production for 1989/90 is estimated at 799.6 million tons, down 9.8 million or 1 percent from last month, but up 10 percent from last year. Important changes from last month include the following:

- o United States Production is estimated at 218.0 million tons, down 4.1 million or 2 percent from last month, but up 46 percent from last year's drought-reduced harvest.
- o USSR Production is estimated at 100.0 million tons, down 5.5 million or 5 percent from last month, but up 3 percent from last year. Reductions were made for barley (-6.5 million tons) and oats (-2.0 million tons); upward adjustments were made for rye (+2.0 million tons), corn (+0.5 million tons), and millet (+0.5 million tons).
- o EC-12 Production is estimated at 80.3 million tons, down 0.5 million or 1 percent from last month and down 9 percent from 1988. Yield estimates were lowered for French corn and barley, Spanish barley, and German oats. These changes were partially offset by increased yield estimates for German barley and Spanish corn.
- o India Production is estimated at 32.4 million tons, up 0.7 million or 2 percent from last month, but down 1 percent from last year. The upward revision is based on sorghum production rising an estimated 0.5 million tons due to excellent rainfall and corn production up 0.2 million with increased estimated area.
- o Zambia Production is estimated at 1.8 million tons, up 0.3 million or 21 percent from last month, but down 10 percent from last year. The increase is due to higher estimated yield; damage due to early season storms was less than earlier expected.

**RICE (MILLED-BASIS):** World production for 1989/90 is estimated at a record 330.0 million tons, up 1.8 million or less than 1 percent from last month and up 4 percent from the 1988/89 crop. Foreign production in 1989/90 is projected at a record 325.2 million tons. U.S. output is projected at 4.8 million tons, down 1 percent from last month and 5 percent from last season. Important changes from last month include the following:

- o India Production is estimated at 66.0 million tons, up 1.0 million or 2 percent from last month, but down 6 percent from last year's record crop. The increase is due mainly to higher estimated area. Dry conditions in northwest India are expected to prevent the yield from reaching last year's record level.

- o Burma Production is estimated at 7.5 million tons, up 0.3 million or 4 percent from last month, but unchanged from last year. The change reflects higher forecast yields.
- o Thailand Production is estimated at 14.2 million tons, up 0.5 million or 3 percent from last month and up 2 percent from last year. Area estimates were raised for both 1988/89 and 1989/90.

**OILSEEDS:** World production for 1989/90 is forecast at 214.7 million tons, down 0.7 million or less than 1 percent from last month, but up 7 percent from last year. U.S. production is estimated at 59.2 million tons, down 1.5 million or 3 percent from last month, but up 18 percent from last year. Foreign production is estimated at 155.5 million tons, up 0.9 million or 1 percent from last month and up marginally from record foreign output last year.

- \* Soybeans: World production for 1989/90 is forecast at 107.9 million tons, down 1.1 million or 1 percent from last month, but up 15 percent from last year. An important change from last month is the following:

- o United States Production is estimated at 51.9 million tons, down 1.2 million or 2 percent from last month, but up 24 percent from last year. The area estimate is 2 percent below last month, reflecting planting intentions not realized in the Delta.

- \* Cottonseed: World production for 1989/90 is forecast at 30.9 million tons, down 0.2 million or 1 percent from last month and down 4 percent from last year. An important change from last month is the following:

- o United States Production is estimated at 4.2 million tons, down 0.3 million or 6 percent from last month and down 24 percent from last year. The decline is attributed to reduced cotton crop prospects in Texas and the Delta States.

- \* Peanuts: World production for 1989/90 is forecast at 22.9 million tons, up 0.5 million or 2 percent from last month. An important change from last month is the following:

- o India Production is estimated at 7.5 million tons, up 0.5 million or 7 percent from last month, but down 11 percent from last year's record crop. Area is estimated 7.6 million hectares, up 0.2 million from last month, although below last year's record level. Above average yields are forecast for the kharif crop, which is entering the reproductive phase this month.

- \* **Sunflowerseed:** World production for 1989/90 is forecast at 21.1 million tons, down 0.3 million or 2 percent from last month, but up 4 percent from last year. Significant changes from last month include the following:
  - o **United States** Production is estimated at 1.0 million tons, down 50,000 tons or 5 percent from last month. Hot, dry weather in the Northern Plains has reduced sunflowerseed yield potential.
  - o **EC-12** Production is estimated at 3.1 million tons, down 0.3 million or 9 percent from last month and down 21 percent from last year. Hot, dry weather is expected to lower yields in France.
- \* **Rapeseed:** World production for 1989/90 is estimated at 21.9 million tons, up 0.5 million or 2 percent from last month, but down 3 percent from last year. Significant changes from a month ago include the following:
  - o **EC-12** Production is estimated at 4.7 million tons, up 0.2 million or 4 percent from last month, but down 8 percent from last year. Area and yield estimates were raised for France, more than offsetting lower estimated yields for spring-planted rapeseed in Denmark.
  - o **India** Production is estimated at 3.5 million tons, up 0.2 million or 6 percent from last month, but down 17 percent from the revised estimate of 4.3 million tons for last year's crop. Area is forecast at 4.8 million hectares, up 0.2 million from last month, but below last year.
- \* **Flaxseed:** World production for 1989/90 is estimated at 2.1 million tons, down marginally from last month, but up 23 percent from last year. There were no major changes in the country estimates this month.
- \* **Copra:** World production for 1989/90 is estimated at 4.7 million tons, unchanged from last month and up 4 percent from last year.
- \* **Palm Kernels:** World production for 1989/90 is forecast at 3.1 million tons, up slightly from last month and up 0.2 million or 6 percent from last year.
- \* **Palm Oil:** World production for 1989/90 is estimated at 9.9 million tons, essentially unchanged from last month and up 7 percent from the estimate for last year.

**COTTON:** World cotton production for 1989/90 is estimated at 80.6 million bales, down 0.2 million or less than 1 percent from last month and down 3.4 million or 4 percent from last year. Foreign production is estimated at 68.8 million bales, virtually unchanged from last month, but up 0.2 million from 1988/89. An important change from a month ago is:

- o **United States** Production is forecast at 11.8 million bales, down 0.2 million or 1 percent from last month and down 23 percent from 1988/89. Further rain damage to the crop in the delta states and hot dry weather in the Texas high plains reduced prospects from a month ago.

TABLE 1

*U.S. Crop Acreage, Yield, and Production 1/*

Commodity	--Planted Area--			--Harvested Area--			--Yield--			--Production--		
	1987/88	1988/89	Proj. 1989/90	1987/88	1988/89	Proj. 1989/90	1987/88	1988/89	Proj. 1989/90	1987/88	1988/89	Proj. 1989/90
	--Million Acres--			--Million Acres--			--Bushels per Acre--			--Million Bushels--		
All Wheat	65.8	65.5	76.8	56.0	53.2	62.7	37.7	34.1	32.6	2107	1811	2044
Winter	48.8	48.8	55.2	39.3	39.8	41.9	39.8	39.2	35.0	1565	1561	1466
Other	17.0	16.7	21.5	16.6	13.4	20.8	32.6	18.7	27.8	542	250	578
Rye	2.5	2.4	2.1	0.7	0.6	0.5	28.3	24.8		20	15	15
Soybeans	58.0	58.9	60.5	57.0	57.4	59.1	33.7	26.8	32.3	1923	1539	1905
Corn	65.7	67.6	72.3	59.2	58.2	65.2	119.4	84.6	112.8	7072	4921	7348
Sorghum	11.8	10.4	11.9	10.6	9.1	10.5	69.7	63.8	63.1	739	578	664
Barley	11.0	9.7	9.3	10.1	7.5	8.6	52.7	38.6	45.8	530	291	392
Oats	18.0	13.9	12.1	6.9	5.6	7.3	54.0	39.1	52.3	374	219	381
							--Pounds per Acre--			---Million CWT.---		
Rice	2.4	2.9	2.8	2.3	2.9	2.7	5,555	5,511	5,497	129.6	159.5	150.9
										---Million 480-Pound---		
All Cotton	10.4	12.5	10.5	10.0	11.9	9.5	706	619	595	14.8	15.4	11.8

1/ Estimates from USDA Agricultural Statistics Board for 1987/88, 1988/89, and for August 1989/90, except rye. July 1989/90 wheat, barley, and oats estimates are also from USDA Agricultural Statistics Board. All other July 1989/90 estimates, as well as the August 1989/90 rye estimates, from USDA Interagency Commodity Estimates Committees.

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FOREIGN PRODUCTION ESTIMATES DIVISION, FAS, USDA

TABLE 2

## World Crop Production Summary

Commodity	World	Total Foreign	North America			Europe			USSR	Asia					South America		Selected Other			All Other Countries
			United States		Mexico	EC-12	Oth. W. Europe	Eastern Europe		China	India	Indonesia	Pakistan	Thailand	Argentina	Brazil	Australia	South Africa	Turkey	
----Million Metric Tons----																				
Wheat 1987/88 1988/89 prel. 1989/90 proj. July August	501.8	444.4	57.4	26.0	3.7	71.4	4.0	39.8	83.3	44.3	0.0	12.0	0.0	8.8	6.1	12.4	3.1	13.0	16.1	
	500.5	451.2	49.3	15.7	3.2	74.9	3.9	45.1	84.4	45.1	0.0	12.7	0.0	7.8	5.8	14.5	3.5	15.0	17.2	
	533.4	475.7	57.6	26.0	3.9	77.6	4.1	41.1	91.5	50.0	0.0	14.3	0.0	10.5	4.5	14.3	3.3	12.0	16.0	
	527.0	471.3	55.6	24.0	3.9	77.5	4.1	41.5	87.0	51.0	0.0	14.3	0.0	11.0	4.8	14.3	3.3	12.0	16.0	
Coarse Grains 1987/88 1988/89 prel. 1989/90 proj. July August	791.5	575.6	215.9	25.5	14.5	82.4	10.9	63.9	113.7	23.5	4.8	1.7	3.0	13.1	25.4	6.8	7.9	9.3	62.6	
	729.5	580.0	149.6	19.6	14.3	88.9	11.2	60.8	97.5	32.6	5.0	1.7	4.6	6.7	26.7	6.7	12.2	10.0	74.5	
	809.4	587.3	222.1	23.3	15.0	80.7	11.5	69.0	105.5	31.7	5.0	1.8	4.8	12.5	24.8	7.2	8.8	9.1	68.0	
	799.6	581.7	218.0	23.3	15.0	80.3	11.5	68.9	100.0	32.4	5.0	1.8	4.8	12.5	24.8	7.2	8.8	9.1	67.7	
Rice (Milled) 1987/88 1988/89 1989/90 July August	313.2	309.1	4.1	0.0	0.4	1.3	0.0	0.2	1.7	122.1	27.0	3.2	11.9	0.2	8.0	0.5	0.0	0.2	21.9	
	328.7	323.7	5.1	0.0	0.3	1.3	0.0	0.2	1.9	119.7	27.5	3.1	13.9	0.2	7.2	0.6	0.0	0.2	22.1	
	328.2	323.4	4.9	0.0	0.4	1.2	0.0	0.2	1.8	122.5	28.0	3.5	13.7	0.3	7.2	0.5	0.0	0.2	22.7	
	330.0	325.2	4.8	0.0	0.4	1.2	0.0	0.2	1.8	122.5	28.0	3.5	14.2	0.3	7.2	0.5	0.0	0.2	22.7	
Total Grains 1/ 1987/88 1988/89 prel. 1989/90 proj. July August	1,606.5	1,329.2	277.3	51.5	18.6	155.1	14.9	104.0	198.7	124.2	31.8	16.9	14.9	22.1	39.5	19.8	11.0	22.4	179.9	
	1,558.7	1,354.8	203.9	35.3	17.8	165.1	15.1	106.2	183.8	147.7	32.5	17.5	18.5	14.7	39.7	21.7	15.7	25.2	198.4	
	1,671.0	1,386.4	284.6	49.3	19.3	159.6	15.6	110.4	198.8	146.7	33.0	19.6	18.6	23.3	36.5	22.0	12.1	21.2	191.4	
	1,656.6	1,378.2	278.4	47.3	19.3	159.0	15.6	110.6	188.8	149.4	33.0	19.6	19.0	23.8	36.8	22.0	12.1	21.2	191.4	
Oilseeds 2/ 1987/88 1988/89 prel. 1989/90 proj. July August	207.9	147.3	60.6	5.9	1.2	12.2	0.5	5.3	11.8	13.6	1.7	3.2	0.6	14.0	19.7	0.8	1.0	2.0	20.2	
	201.1	151.0	50.1	5.9	0.9	11.3	0.6	5.1	12.7	18.4	1.9	3.3	0.7	10.5	23.8	0.8	0.9	2.3	21.1	
	215.4	154.7	60.7	5.8	1.1	10.3	0.7	5.7	12.5	16.2	2.1	3.4	0.7	15.2	22.5	0.9	0.9	2.4	21.7	
	214.7	155.5	59.2	5.8	1.2	10.2	0.7	5.8	12.5	16.9	2.1	3.4	0.7	15.2	22.6	0.9	0.9	2.4	21.7	
----Million 480-Pound Bales----																				
Cotton 1987/88 1988/89 prel. 1989/90 proj. July August	80.8	66.1	14.8	0.0	1.0	1.2	0.0	0.1	11.3	19.5	0.0	6.8	0.1	1.3	3.5	1.3	0.4	2.5	10.1	
	84.0	68.6	15.4	0.0	1.4	1.6	0.0	0.1	12.6	19.1	0.0	6.6	0.2	0.8	3.3	1.2	0.3	3.0	10.2	
	80.8	68.8	12.0	0.0	0.9	1.6	0.0	0.1	11.5	20.0	0.0	6.8	0.1	0.9	3.5	1.4	0.4	2.9	10.5	
	80.6	68.8	11.8	0.0	0.9	1.6	0.0	0.1	11.5	20.0	0.0	6.8	0.1	0.9	3.5	1.4	0.4	2.9	10.5	

1/ Includes total of wheat, coarse grains, and rice (milled) shown above. Estimates of Soviet total grain production, including wheat, coarse grains, rice (rough), minor grains and pulses are 211.4 million tons in 1987/88, 195.1 million in 1988/89, and 200.0 million forecast in 1989/90.

2/ Totals for major regions and countries include the six major oilseeds shown elsewhere in this report, while world and total foreign also include copra and palm kernels for all countries. Note: Entries of 0.0 indicate no reported or insignificant production.

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FOREIGN PRODUCTION ESTIMATES DIVISION, FAS, USDA

TABLE 3

## Wheat Area, Yield, and Production: World and Selected Countries and Regions

Country/Region	---Area---			---Yield---				---Production---			
	Prel. Proj.			Prel. 1989/90 Proj.				Prel. 1989/90 Proj.			
	1987/88	1988/89	1989/90	1987/88	1988/89	July	Aug.	1987/88	1988/89	July	Aug.
	---Million Hectares---			---Metric Tons Per Hectare---				---Million Metric Tons---			
World	219.9	217.9	226.5	2.28	2.30		2.33	501.8	500.5	533.4	527.0
United States	22.6	21.5	25.4	2.53	2.29		2.19	57.4	49.3	57.6	55.6
Total Foreign	197.3	196.3	201.1	2.25	2.30	2.36	2.34	444.4	451.2	475.7	471.3
Maj. Foreign Exporters	43.3	41.8	45.1	2.74	2.70	2.87	2.81	118.6	112.8	128.4	126.8
Argentina	4.8	4.5	5.7	1.84	1.75	1.91	1.93	8.8	7.8	10.5	11.0
Australia	9.1	8.9	9.5	1.37	1.62	1.51	1.51	12.4	14.5	14.3	14.3
Canada	13.5	12.9	13.6	1.93	1.21	1.93	1.76	26.0	15.7	26.0	24.0
EC-12	15.9	15.5	16.3	4.50	4.83	4.76	4.75	71.4	74.9	77.6	77.5
Major Importers	95.4	96.3	96.5	2.34	2.40	2.43	2.42	223.6	231.1	237.4	233.6
Brazil	3.5	3.5	3.0	1.76	1.68	1.61	1.60	6.1	5.8	4.5	4.8
China	28.8	28.8	29.8	2.98	3.00	3.05	3.05	85.8	86.4	91.0	91.0
Eastern Europe	10.5	10.6	10.6	3.78	4.24	3.88	3.92	39.8	45.1	41.1	41.5
Egypt	0.6	0.6	0.6	4.23	4.76	4.76	4.76	2.4	2.8	3.0	3.0
Other N. Africa */	5.1	4.4	4.7	1.01	1.25	1.14	1.14	5.2	5.5	5.3	5.3
Japan	0.3	0.3	0.3	3.19	3.62	3.30	3.30	0.9	1.0	0.9	0.9
USSR	46.7	48.1	47.5	1.78	1.76	1.87	1.83	83.3	84.4	91.5	87.0
Other Foreign	58.6	58.3	59.5	1.75	1.84	1.86	1.86	102.2	107.3	109.9	111.0
India	23.1	22.6	23.6	1.92	2.00	2.15	2.16	44.3	45.1	50.0	51.0
Iran	6.1	6.3	6.3	0.98	1.08	1.00	1.00	6.0	6.8	6.3	6.3
Mexico	0.9	0.8	1.0	4.11	4.00	4.11	4.11	3.7	3.2	3.9	3.9
Non-EC W. Europe	0.9	0.8	0.9	4.20	4.90	4.66	4.66	4.0	3.9	4.1	4.1
Pakistan	7.7	7.3	7.6	1.56	1.73	1.89	1.89	12.0	12.7	14.3	14.3
South Africa	1.7	2.0	2.0	1.81	1.76	1.69	1.69	3.1	3.5	3.3	3.3
Turkey	8.7	8.8	8.7	1.49	1.71	1.38	1.38	13.0	15.0	12.0	12.0
Others	9.4	9.7	9.6	1.72	1.76	1.68	1.68	16.1	17.2	16.0	16.0

\*/ Algeria, Libya, Morocco, and Tunisia.

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FOREIGN PRODUCTION ESTIMATES DIVISION, FAS, USDA

TABLE 4  
Coarse Grains Area, Yield, and Production: World and Selected Countries and Regions

Country/Region	---Area---			---Yield---				---Production---			
	Prel.	Proj.		Prel.	1989/90	Proj.		Prel.	1989/90	Proj.	
	1987/88	1988/89	1989/90	1987/88	1988/89	July	Aug.	1987/88	1988/89	July	Aug.
TOTAL COARSE GRAINS 1/	---Million Hectares---			---Metric Tons Per Hectare---				---Million Metric Tons---			
World	323.2	327.2	327.5	2.45	2.23		2.44	791.5	729.5	809.4	799.6
United States	35.4	32.8	37.2	6.10	4.57		5.85	215.9	149.6	222.1	218.0
Total Foreign	287.8	294.4	290.2	2.00	1.97	2.01	2.00	575.6	580.0	587.3	581.7
Maj. Foreign Exporters	23.4	21.2	23.2	2.40	2.35	2.44	2.44	56.3	49.8	56.6	56.6
Argentina	4.4	3.0	4.2	2.99	2.22	2.98	2.98	13.1	6.7	12.5	12.5
Australia	4.6	4.6	4.7	1.49	1.46	1.54	1.54	6.8	6.7	7.2	7.2
Canada	8.0	7.2	7.9	3.21	2.73	2.97	2.97	25.5	19.6	23.3	23.3
South Africa	4.6	4.6	4.6	1.73	2.64	1.89	1.89	7.9	12.2	8.8	8.8
Thailand	2.0	1.8	1.8	1.51	2.54	2.65	2.65	3.0	4.6	4.8	4.8
Major Importers	107.7	106.7	103.9	2.66	2.57	2.69	2.67	286.8	274.3	283.3	277.2
Eastern Europe	17.8	18.2	18.2	3.58	3.33	3.79	3.78	63.9	60.8	69.0	68.9
EC-12	19.0	19.3	18.6	4.33	4.61	4.33	4.32	82.4	88.9	80.7	80.3
Other W. Europe	3.1	3.2	3.2	3.48	3.46	3.59	3.59	10.9	11.2	11.5	11.5
Mexico	7.8	7.6	7.9	1.87	1.88	1.90	1.90	14.5	14.3	15.0	15.0
USSR	59.5	57.8	55.5	1.91	1.69	1.85	1.80	113.7	97.5	105.5	100.0
Other Major Import. 2/	0.5	0.5	0.5	3.14	3.47	3.11	3.11	1.5	1.6	1.5	1.5
Other Foreign	156.6	166.5	163.2	1.48	1.54	1.52	1.52	232.4	255.9	247.4	247.8
Brazil	13.6	14.0	13.5	1.87	1.91	1.84	1.84	25.4	26.7	24.8	24.8
China	28.7	27.8	28.4	3.33	3.39	3.36	3.36	95.8	94.2	95.7	95.7
India	36.3	39.7	39.5	0.65	0.82	0.81	0.82	23.5	32.6	31.7	32.4
Indonesia	2.7	2.6	2.6	1.79	1.92	1.92	1.92	4.8	5.0	5.0	5.0
Nigeria	9.4	10.1	10.2	0.72	0.84	0.85	0.85	6.8	8.5	8.7	8.7
Philippines	3.8	3.8	3.8	1.15	1.16	1.18	1.18	4.3	4.4	4.5	4.5
Turkey	4.3	4.4	4.4	2.17	2.29	2.08	2.08	9.3	10.0	9.1	9.1
Others	57.9	64.2	60.8	1.08	1.16	1.11	1.11	62.6	74.5	68.0	67.7
BARLEY											
World	79.6	77.5	75.2	2.27	2.14		2.18	180.7	166.3	171.5	164.0
United States	4.1	3.0	3.5	2.83	2.07		2.46	11.5	6.3	9.7	8.5
Total Foreign	75.6	74.5	71.7	2.24	2.15	2.22	2.17	169.1	160.0	161.8	155.4
Australia	2.4	2.4	2.4	1.46	1.40	1.52	1.52	3.5	3.4	3.7	3.7
Canada	5.0	4.1	4.5	2.79	2.44	2.67	2.67	14.0	10.1	12.0	12.0
China	3.4	3.3	3.4	1.78	1.92	2.05	2.05	6.0	6.3	6.9	6.9
Eastern Europe	4.3	4.3	4.4	3.79	3.73	3.69	3.73	16.3	16.2	15.9	16.3
EC-12	12.2	12.2	11.7	3.83	4.14	3.87	3.89	46.8	50.6	45.7	45.5
Other W. Europe	1.7	1.8	1.7	3.10	3.20	3.34	3.34	5.2	5.7	5.6	5.6
Turkey	3.2	3.3	3.3	1.88	2.12	1.82	1.82	6.0	7.0	6.0	6.0
USSR	30.7	29.7	28.0	1.91	1.50	1.79	1.63	58.4	44.5	52.0	45.5
Others	12.7	13.2	12.5	1.02	1.22	1.13	1.13	12.9	16.1	14.1	14.1

FOOTNOTES AT END OF TABLE

CONTINUED

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FOREIGN PRODUCTION ESTIMATES DIVISION, FAS, USDA

TABLE 4 (Continued)  
Coarse Grains Area, Yield, and Production: World and Selected Countries and Regions

Country/Region	---Area---			---Yield---				---Production---			
	Prel.	Proj.		Prel.	1989/90	Proj.		Prel.	1989/90	Proj.	
	1987/88	1988/89	1989/90	1987/88	1988/89	July	Aug.	1987/88	1988/89	July	Aug.
CORN	---Million Hectares---			---Metric Tons Per Hectare---				---Million Metric Tons---			
World	125.0	125.0	128.4	3.58	3.19		3.61	447.4	398.6	466.3	464.0
United States	24.0	23.5	26.4	7.50	5.31		7.08	179.6	125.0	189.2	186.7
Total Foreign	101.1	101.4	102.0	2.65	2.70	2.72	2.72	267.7	273.6	277.0	277.4
Maj. Foreign Exporters	8.0	7.1	7.9	2.35	2.90	2.68	2.68	18.8	20.5	21.0	21.0
Argentina	2.6	1.7	2.5	3.46	2.76	3.40	3.40	9.0	4.7	8.5	8.5
South Africa	3.7	3.8	3.8	1.93	3.04	2.13	2.13	7.1	11.5	8.0	8.0
Thailand	1.8	1.6	1.6	1.56	2.69	2.81	2.81	2.7	4.3	4.5	4.5
Major Importers	21.9	22.2	22.2	3.79	3.81	3.99	3.99	83.2	84.3	88.6	88.5
Eastern Europe	7.3	7.3	7.3	4.14	3.72	4.74	4.72	30.3	27.3	35.0	34.6
EC-12	3.7	4.0	3.9	6.99	7.07	6.60	6.49	25.9	28.6	25.6	25.5
Other W. Europe	0.2	0.2	0.2	8.01	8.31	8.08	8.08	1.8	1.9	1.7	1.7
Mexico	6.0	6.0	6.1	1.65	1.68	1.69	1.69	9.9	10.1	10.3	10.3
USSR	4.6	4.4	4.5	3.24	3.62	3.44	3.56	14.8	16.0	15.5	16.0
Other Maj. Import. 2/	0.1	0.1	0.1	4.17	4.18	4.18	4.18	0.5	0.4	0.5	0.5
Other Foreign	71.1	72.2	72.0	2.33	2.34	2.33	2.33	165.7	168.8	167.4	167.8
Brazil	13.2	13.5	13.0	1.88	1.93	1.85	1.85	24.7	26.0	24.0	24.0
Canada	1.0	1.0	1.0	7.02	5.47	6.20	6.20	7.0	5.4	6.2	6.2
China	20.2	19.6	20.0	3.92	3.95	3.90	3.90	79.2	77.4	78.0	78.0
Egypt	0.8	0.8	0.8	5.14	4.97	5.21	5.21	4.2	4.1	4.3	4.3
India	5.5	5.9	6.0	1.00	1.36	1.34	1.33	5.5	8.0	7.8	8.0
Indonesia	2.7	2.6	2.6	1.79	1.92	1.92	1.92	4.8	5.0	5.0	5.0
Philippines	3.8	3.8	3.8	1.15	1.16	1.18	1.18	4.3	4.4	4.5	4.5
Zimbabwe	1.2	1.2	1.2	1.80	1.56	1.60	1.63	2.2	1.9	2.0	2.0
Others	22.7	23.8	23.6	1.48	1.54	1.51	1.52	33.8	36.6	35.6	35.9
SORGHUM											
World	42.0	44.4	45.1	1.33	1.27		1.33	56.0	56.3	59.5	59.7
United States	4.3	3.7	4.3	4.38	4.00		3.96	18.8	14.7	17.1	16.9
Total Foreign	37.7	40.7	40.8	0.99	1.02	1.04	1.05	37.2	41.6	42.4	42.9
Argentina	1.0	0.7	1.0	3.00	1.79	3.00	3.00	3.0	1.3	3.0	3.0
Australia	0.7	0.6	0.8	1.86	1.68	1.88	1.88	1.4	1.1	1.5	1.5
China	1.9	1.8	1.9	2.91	2.96	2.93	2.93	5.4	5.3	5.5	5.5
India	15.6	16.2	16.2	0.61	0.71	0.69	0.71	9.5	11.5	11.0	11.5
Mexico	1.4	1.3	1.4	2.91	2.92	2.98	2.98	4.0	3.7	4.1	4.1
Nigeria	4.3	4.4	4.4	0.67	0.80	0.80	0.80	2.9	3.5	3.5	3.5
South Africa	0.3	0.3	0.3	1.52	1.58	1.65	1.65	0.5	0.4	0.5	0.5
Sudan	3.0	5.3	4.8	0.43	0.83	0.63	0.63	1.3	4.4	3.0	3.0
Thailand	0.2	0.2	0.2	1.10	1.43	1.45	1.45	0.2	0.3	0.3	0.3
Others	9.3	9.9	9.8	0.97	1.03	1.01	1.01	9.0	10.2	9.9	9.9

FOOTNOTES AT END OF TABLE

CONTINUED

AUGUST 1989

FOREIGN PRODUCTION ESTIMATES DIVISION, FAS, USDA

TABLE 4 (Continued)  
Coarse Grains Area, Yield, and Production: World and Selected Countries and Regions

Country/Region	---Area---				---Yield---					---Production---			
	1987/88	Prel.	Proj.		1987/88	Prel.	1989/90 July	Proj.		1987/88	Prel.	1989/90 July	Proj.
		1988/89	1989/90			1988/89	Aug.				1988/89	Aug.	
OATS	---Million Hectares---				---Metric Tons Per Hectare---					---Million Metric Tons---			
World	23.6	22.4	22.2		1.84	1.68		1.82		43.3	37.7	42.7	40.4
United States	2.8	2.3	2.9		1.94	1.40		1.88		5.4	3.2	5.6	5.5
Total Foreign	20.8	20.1	19.3		1.82	1.72	1.83	1.81		37.9	34.5	37.1	34.9
USSR	11.8	10.9	10.0		1.57	1.40	1.55	1.50		18.5	15.3	17.0	15.0
Maj. Foreign Exporters	3.5	3.7	3.8		1.96	1.85	1.93	1.93		6.8	6.7	7.3	7.3
Argentina	0.5	0.4	0.5		1.30	1.10	1.39	1.39		0.7	0.4	0.6	0.6
Australia	1.3	1.4	1.3		1.32	1.41	1.32	1.32		1.7	2.0	1.7	1.7
Canada	1.3	1.4	1.6		2.37	2.10	2.19	2.19		3.0	3.0	3.5	3.5
Sweden	0.4	0.4	0.4		3.63	3.14	3.37	3.37		1.4	1.3	1.5	1.5
Other Foreign	5.5	5.5	5.5		2.27	2.26	2.32	2.29		12.5	12.5	12.7	12.6
China	0.6	0.6	0.6		1.10	1.19	1.20	1.20		0.6	0.7	0.7	0.7
Eastern Europe	1.4	1.4	1.4		2.79	2.62	2.72	2.72		4.0	3.7	3.9	3.9
East Germany	0.1	0.2	0.2		4.28	3.30	3.81	3.81		0.6	0.5	0.6	0.6
Poland	0.9	0.9	0.9		2.84	2.62	2.70	2.70		2.4	2.2	2.3	2.3
EC-12	1.8	1.8	1.7		3.02	3.13	3.07	2.99		5.3	5.5	5.3	5.1
France	0.3	0.3	0.3		3.91	3.86	3.90	3.90		1.0	1.0	1.0	1.0
West Germany	0.6	0.6	0.5		4.30	4.23	4.29	4.02		2.4	2.4	2.3	2.1
Finland	0.4	0.4	0.4		2.21	2.21	2.75	2.75		0.8	0.9	1.1	1.1
Norway	0.1	0.1	0.1		3.87	2.98	3.68	3.68		0.5	0.4	0.5	0.5
Others	1.3	1.3	1.3		1.06	1.07	1.07	1.07		1.3	1.4	1.4	1.4
RYE	---				---					---			
World	15.6	15.9	16.3		2.12	2.07		2.19		33.0	33.0	33.8	35.8
United States	0.3	0.2	0.2		1.82	1.55		1.82		0.5	0.4	0.4	0.4
Total Foreign	15.3	15.6	16.1		2.13	2.08	2.11	2.20		32.5	32.6	33.4	35.4
USSR	9.7	10.1	10.3		1.86	1.83	1.80	1.94		18.1	18.5	18.0	20.0
Maj. Foreign Exporter	0.3	0.2	0.4		1.58	1.05	1.74	1.74		0.5	0.3	0.6	0.6
Canada													
Other Foreign	3.7	3.9	3.9		2.72	2.58	2.74	2.74		10.0	10.0	10.8	10.8
Eastern Europe	0.7	0.6	0.7		3.49	2.93	3.12	3.12		2.3	1.8	2.0	2.0
East Germany	2.6	2.9	2.9		2.57	2.51	2.70	2.70		6.8	7.2	7.8	7.8
Poland	0.1	0.2	0.2		3.49	3.42	3.42	3.42		0.5	0.5	0.5	0.5
Czechoslovakia	1.0	0.9	1.0		2.93	3.05	3.00	3.00		3.0	2.9	2.9	2.9
EC-12	0.1	0.1	0.1		3.77	4.58	4.20	4.20		0.5	0.4	0.4	0.4
Denmark	0.4	0.4	0.4		3.89	4.19	4.18	4.18		1.6	1.6	1.6	1.6
West Germany	0.6	0.5	0.6		1.77	2.03	2.00	2.00		1.0	1.0	1.1	1.1

1/ Total of barley, corn, sorghum, oats, and rye shown below plus millet and mixed grain.

2/ Japan, Republic of Korea, and Taiwan.

TABLE 5  
Rice Area, Yield, and Production: World and Selected Countries and Regions

Country/Region	---Area---			---Yield---			---Production--- (Rough Basis)			---Milling Rate---			---Production--- (Milled Basis)		
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	
	Prel.	Proj.		Prel.	1989/90 Proj.		Prel.	1989/90 Proj.		Prel.	1989/90 Proj.		Prel.	1989/90 Proj.	
	1987/88	1988/89	1989/90	:1987/88	1988/89	July	Aug.	:1987/88	1988/89	July	Aug.	:1987/88	1988/89	July	Aug.
-----															
	---Million Hectares---			---Metric Tons Per Hectare---			---Million Metric Tons---			---In Percent---			---Million Metric Tons---		
	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
World	: 140.7	: 143.7	: 145.4	: 3.28	: 3.38	: 3.36	: 461.9	: 485.6	: 488.9	: 67.8	: 67.6	: 67.5	: 313.2	: 328.7	: 330.0
United States	:	: 0.9	: 1.2	: 6.23	: 6.17	: 6.16	:	: 5.9	: 7.2	: 6.9	: 6.8	: 70.0	: 4.1	: 5.1	: 4.8
Total Foreign	:	: 139.7	: 142.6	: 3.26	: 3.36	: 3.32	: 456.1	: 478.3	: 478.9	: 67.8	: 67.7	: 67.5	: 309.1	: 323.7	: 325.2
Maj. Foreign Exporters	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Burma	: 15.6	: 16.6	: 16.9	: 2.20	: 2.29	: 2.33	: 34.4	: 38.2	: 38.1	: 64.1	: 64.2	: 64.2	: 22.0	: 24.5	: 25.2
Pakistan	: 4.4	: 4.5	: 4.5	: 2.59	: 2.80	: 2.67	: 11.5	: 12.5	: 12.0	: 60.0	: 60.0	: 60.0	: 6.9	: 7.5	: 7.5
Thailand	: 2.0	: 1.9	: 2.1	: 2.48	: 2.40	: 2.56	: 4.9	: 4.7	: 5.3	: 66.7	: 66.7	: 66.7	: 3.2	: 3.1	: 3.5
	: 9.2	: 10.3	: 10.3	: 1.95	: 2.05	: 2.02	: 18.0	: 21.0	: 20.8	: 66.0	: 66.0	: 66.0	: 11.9	: 13.9	: 14.2
Major Importers	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
EC-12	: 12.9	: 13.0	: 13.0	: 4.18	: 4.29	: 4.32	: 54.0	: 55.8	: 56.0	: 66.2	: 66.1	: 66.1	: 35.7	: 36.9	: 37.0
Indonesia	: 0.3	: 0.3	: 0.3	: 5.78	: 5.59	: 5.65	: 1.9	: 1.9	: 1.9	: 67.8	: 66.3	: 67.0	: 1.3	: 1.3	: 1.2
Nigeria	: 9.8	: 9.8	: 9.8	: 4.24	: 4.32	: 4.40	: 41.5	: 42.3	: 43.1	: 65.0	: 65.0	: 65.0	: 27.0	: 27.5	: 28.0
	: 0.6	: 0.6	: 0.6	: 1.31	: 1.42	: 1.49	: 0.8	: 0.9	: 1.0	: 66.5	: 66.5	: 66.5	: 0.6	: 0.6	: 0.6
Republic of Korea	: 1.3	: 1.3	: 1.2	: 6.02	: 6.64	: 6.40	: 7.6	: 8.4	: 7.8	: 72.3	: 72.3	: 72.3	: 5.5	: 6.1	: 5.6
Other Maj. Import. */	: 0.9	: 1.0	: 1.0	: 2.33	: 2.39	: 2.37	: 2.1	: 2.3	: 2.3	: 65.5	: 65.5	: 65.5	: 1.4	: 1.5	: 1.5
Other Foreign	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Australia	: 111.2	: 112.9	: 114.4	: 3.31	: 3.40	: 3.38	: 367.7	: 384.4	: 384.9	: 68.4	: 68.2	: 68.0	: 251.4	: 262.3	: 263.0
Bangladesh	: 0.1	: 0.1	: 0.1	: 7.12	: 7.50	: 7.19	: 0.8	: 0.8	: 0.8	: 71.0	: 71.5	: 71.5	: 0.5	: 0.6	: 0.5
Brazil	: 10.3	: 9.2	: 10.5	: 2.24	: 2.52	: 2.24	: 23.1	: 23.0	: 23.6	: 66.7	: 66.7	: 66.7	: 15.4	: 15.4	: 15.7
	: 6.0	: 5.5	: 5.5	: 1.98	: 1.94	: 1.93	: 11.8	: 10.7	: 10.6	: 68.0	: 68.0	: 68.0	: 8.0	: 7.2	: 7.2
China	: 32.2	: 31.9	: 31.9	: 5.42	: 5.37	: 5.49	: 174.4	: 171.0	: 175.0	: 70.0	: 70.0	: 70.0	: 122.1	: 119.7	: 122.5
India	: 38.3	: 41.5	: 41.5	: 2.21	: 2.53	: 2.39	: 84.6	: 105.0	: 97.5	: 66.7	: 66.7	: 66.7	: 56.4	: 70.0	: 65.0
Japan	: 2.1	: 2.1	: 2.1	: 6.19	: 5.82	: 6.32	: 13.3	: 12.4	: 13.5	: 72.8	: 72.8	: 72.8	: 9.7	: 9.0	: 9.8
Philippines	: 3.3	: 3.4	: 3.4	: 2.65	: 2.66	: 2.69	: 8.7	: 8.9	: 9.2	: 65.0	: 65.0	: 65.0	: 5.6	: 5.8	: 6.0
USSR	: 0.7	: 0.7	: 0.7	: 4.13	: 4.27	: 4.03	: 2.7	: 2.9	: 2.7	: 65.0	: 65.0	: 65.0	: 1.7	: 1.9	: 1.8
Vietnam	: 5.6	: 5.8	: 5.8	: 2.74	: 2.83	: 2.84	: 15.3	: 16.3	: 16.5	: 65.0	: 65.0	: 65.0	: 9.9	: 10.6	: 10.7
Others	: 12.6	: 12.9	: 12.9	: 2.62	: 2.59	: 2.76	: 33.1	: 33.4	: 35.7	: 66.3	: 66.3	: 63.8	: 21.9	: 22.1	: 22.7

\* / Hong Kong, Iran, Iraq, Ivory Coast, and Saudi Arabia.

TABLE 6  
Oilseeds Area, Yield, and Production: World and Selected Countries and Regions

Country/Region	---Area---			---Yield---				---Production---			
	Prel.	Proj.		Prel.	1989/90	Proj.		Prel.	1989/90	Proj.	
	1987/88	1988/89	1989/90	1987/88	1988/89	July	Aug.	1987/88	1988/89	July	Aug.
	---Million Hectares---			---Metric Tons Per Hectare---				---Million Metric Tons---			
SOYBEANS											
World	54.15	55.50	58.00	1.91	1.70		1.86	103.35	94.08	109.06	107.92
United States	23.06	23.22	23.91	2.27	1.80		2.17	52.33	41.88	53.07	51.85
Total Foreign	31.09	32.27	34.09	1.64	1.62	1.64	1.64	51.02	52.20	55.99	56.06
Maj. Foreign Exporters	14.78	16.10	17.00	1.88	1.80	1.85	1.85	27.72	29.00	31.50	31.50
Argentina	4.26	4.00	5.00	2.28	1.65	2.10	2.10	9.70	6.60	10.50	10.50
Brazil	10.52	12.10	12.00	1.71	1.85	1.75	1.75	18.02	22.40	21.00	21.00
Other Foreign	16.31	16.17	17.09	1.43	1.43	1.43	1.44	23.30	23.20	24.49	24.56
Canada	0.46	0.53	0.53	2.75	2.17	2.36	2.36	1.27	1.15	1.25	1.25
China	8.41	8.02	8.30	1.48	1.45	1.45	1.45	12.43	11.65	12.00	12.00
Eastern Europe	0.53	0.56	0.57	1.31	1.19	1.44	1.44	0.69	0.67	0.82	0.82
India	1.68	1.80	1.80	0.58	0.78	0.72	0.72	0.98	1.40	1.30	1.30
Indonesia	0.95	1.05	1.20	1.00	1.05	1.04	1.04	0.95	1.10	1.25	1.25
Mexico	0.39	0.15	0.38	1.92	2.07	1.84	1.89	0.75	0.30	0.70	0.72
Paraguay	0.62	0.70	0.76	1.79	2.01	1.84	1.84	1.10	1.40	1.40	1.40
USSR	0.78	0.76	0.78	0.91	1.16	1.03	1.03	0.71	0.88	0.80	0.80
Others	2.49	2.61	2.77	1.77	1.78	1.81	1.81	4.41	4.65	4.97	5.02
COTTONSEED											
World	31.45	33.93	32.93	0.99	0.95		0.94	31.14	32.25	31.13	30.95
United States	4.06	4.83	3.86	1.29	1.14		1.08	5.23	5.50	4.45	4.19
Total Foreign	27.39	29.09	29.06	0.95	0.92	0.92	0.92	25.90	26.75	26.68	26.76
China	4.84	5.53	5.30	1.49	1.28	1.40	1.40	7.22	7.07	7.40	7.40
India	6.47	7.40	7.70	0.48	0.48	0.47	0.47	3.09	3.56	3.65	3.65
Pakistan	2.57	2.50	2.60	1.15	1.16	1.16	1.14	2.95	2.90	3.01	2.97
USSR	3.53	3.45	3.30	1.27	1.45	1.39	1.39	4.49	5.02	4.58	4.58
Others	9.98	10.21	10.16	0.82	0.80	0.80	0.80	8.17	8.20	8.05	8.17
PEANUTS											
World	18.13	19.13	19.08	1.12	1.19		1.20	20.34	22.77	22.38	22.88
United States	0.63	0.66	0.67	2.62	2.74		3.07	1.64	1.81	2.04	2.05
Total Foreign	17.51	18.47	18.41	1.07	1.13	1.12	1.13	18.70	20.96	20.34	20.83
Brazil	0.10	0.09	0.12	1.67	1.56	1.57	1.57	0.17	0.14	0.18	0.18
China	3.02	2.91	3.05	2.04	1.99	2.03	2.03	6.17	5.80	6.20	6.20
India	6.74	7.80	7.60	0.79	1.06	0.95	0.99	5.30	8.30	7.00	7.50
Senegal	0.85	0.90	0.86	1.10	0.76	0.95	0.95	0.93	0.69	0.82	0.82
South Africa	0.15	0.19	0.19	1.33	1.24	1.24	1.24	0.20	0.23	0.23	0.23
Sudan	0.58	0.58	0.55	0.76	0.78	0.73	0.73	0.44	0.45	0.40	0.40
Others	6.07	6.01	6.05	0.90	0.89	0.91	0.91	5.49	5.35	5.51	5.50

CONTINUED

TABLE 6 (Continued)  
Oilseeds Area, Yield, and Production: World and Selected Countries and Regions

Country/Region	---Area---			---Yield---				---Production---			
	Prel.	Proj.		Prel.	1989/90 Proj.			Prel.	1989/90 Proj.		
	1987/88	1988/89	1989/90	1987/88	1988/89	July	Aug.	1987/88	1988/89	July	Aug.
	---Million Hectares---			---Metric Tons Per Hectare---				---Million Metric Tons---			
SUNFLOWERSEED											
World	15.19	15.33	16.06	1.35	1.33		1.32	20.57	20.40	21.47	21.15
United States	0.72	0.81	0.72	1.65	1.04		1.39	1.18	0.85	1.05	1.00
Total Foreign	14.47	14.52	15.34	1.34	1.35	1.33	1.31	19.38	19.55	20.42	20.15
Argentina	2.06	2.20	2.60	1.36	1.32	1.35	1.35	2.80	2.90	3.50	3.50
China	0.89	0.94	0.94	1.40	1.43	1.45	1.45	1.24	1.34	1.36	1.36
EC-12	2.21	2.07	2.09	1.79	1.89	1.63	1.49	3.95	3.90	3.40	3.10
East Europe	1.38	1.31	1.35	1.73	1.64	1.80	1.80	2.39	2.15	2.43	2.43
USSR	4.16	4.28	4.30	1.46	1.44	1.47	1.47	6.08	6.16	6.30	6.30
Others	3.78	3.72	4.06	0.78	0.83	0.85	0.85	2.94	3.11	3.43	3.46
RAPESEED											
World	16.69	17.87	17.11	1.39	1.26		1.28	23.23	22.43	21.39	21.86
Total Foreign	16.69	17.87	17.11	1.39	1.26	1.27	1.28	23.23	22.43	21.39	21.86
Canada	2.67	3.65	2.95	1.44	1.16	1.25	1.25	3.85	4.24	3.70	3.70
China	5.27	4.93	4.90	1.25	1.02	1.16	1.16	6.61	5.04	5.70	5.70
EC-12	1.86	1.84	1.61	3.20	2.81	2.92	2.94	5.95	5.18	4.55	4.74
East Europe	0.92	0.88	0.99	2.35	2.49	2.46	2.46	2.17	2.19	2.36	2.44
India	4.51	4.90	4.80	0.72	0.86	0.72	0.73	3.24	4.20	3.30	3.50
Others	1.46	1.66	1.86	0.97	0.95	0.96	0.96	1.42	1.58	1.78	1.78
FLAXSEED											
World	4.02	3.91	4.05	0.56	0.45		0.53	2.26	1.74	2.14	2.14
United States	0.19	0.09	0.09	1.01	0.45		0.88	0.19	0.04	0.09	0.08
Total Foreign	3.83	3.82	3.96	0.54	0.45	0.52	0.52	2.07	1.70	2.06	2.06
Argentina	0.69	0.55	0.60	0.80	0.82	0.82	0.82	0.55	0.45	0.49	0.49
Canada	0.59	0.55	0.65	1.23	0.76	1.15	1.15	0.73	0.41	0.75	0.75
India	1.15	1.35	1.25	0.32	0.30	0.29	0.29	0.37	0.40	0.36	0.36
USSR	1.07	1.04	1.10	0.21	0.21	0.20	0.20	0.23	0.22	0.22	0.23
Others	0.33	0.33	0.36	0.59	0.65	0.66	0.66	0.20	0.22	0.24	0.24
MAJOR OILSEEDS TOTAL	139.63	145.65	147.21	1.44	1.33		1.41	200.88	193.66	207.57	206.89
COPRA	--	--	--	--	--	--	--	4.32	4.52	4.70	4.70
PALM KERNEL	--	--	--	--	--	--	--	2.69	2.92	3.08	3.08
TOTAL OILSEEDS	--	--	--	--	--	--	--	207.89	201.09	215.35	214.68
PALM OIL *	--	--	--	--	--	--	--	8.39	9.20	9.84	9.87

TABLE 7

## Cotton Area, Yield, and Production: World and Selected Countries and Regions

Country/Region	---Area---			---Yield---				---Production---			
	Prel. Proj.			Prel. 1989/90 Proj.				Prel. 1989/90 Proj.			
	1987/88	1988/89	1989/90	1987/88	1988/89	July	Aug.	1987/88	1988/89	July	Aug.
	---Million Hectares---			---Kilograms Per Hectare---				---Million 480-Pound Bales---			
World	31.1	34.0	33.0	566	538		532	80.8	84.0	80.8	80.6
United States	4.1	4.8	3.9	791	694		667	14.8	15.4	12.0	11.8
Total Foreign	27.0	29.2	29.1	532	512	514	514	66.1	68.6	68.8	68.8
Maj. Foreign Exporters	12.8	13.5	13.2	764	750	763	763	45.0	46.4	46.2	46.1
Australia	0.2	0.2	0.2	1212	1451	1325	1325	1.3	1.2	1.4	1.4
Central America 1/	0.1	0.1	0.1	814	802	915	922	0.4	0.4	0.5	0.4
China	4.8	5.5	5.3	876	751	822	822	19.5	19.1	20.0	20.0
Egypt	0.4	0.4	0.4	845	718	814	814	1.6	1.4	1.6	1.6
Mexico	0.2	0.3	0.2	956	1178	974	974	1.0	1.4	0.9	0.9
Pakistan	2.6	2.5	2.6	573	578	569	569	6.8	6.6	6.8	6.8
Sudan	0.3	0.3	0.3	416	462	448	448	0.6	0.7	0.7	0.7
Turkey	0.6	0.7	0.7	916	919	919	919	2.5	3.0	2.9	2.9
USSR	3.5	3.4	3.3	700	799	759	759	11.3	12.6	11.5	11.5
Major Importers 2/	0.3	0.4	0.4	834	848	909	909	1.2	1.7	1.6	1.6
Other Foreign	13.9	15.3	15.6	310	293	293	294	19.8	20.5	21.0	21.0
Argentina	0.5	0.5	0.5	547	361	385	385	1.3	0.8	0.9	0.9
Brazil	2.2	2.3	2.4	355	307	321	321	3.5	3.3	3.5	3.5
India	6.5	7.4	7.7	239	241	236	236	7.1	8.2	8.4	8.4
Syria	0.1	0.2	0.2	915	672	794	794	0.5	0.5	0.6	0.6
Others	4.6	4.9	4.8	346	345	343	345	7.3	7.7	7.6	7.6

1/ Nicaragua, Guatemala, El Salvador, Honduras, and Costa Rica.

2/ Western Europe, Eastern Europe, Japan, Hong Kong, Republic of Korea, and Taiwan.

AUGUST 1989

FOREIGN PRODUCTION ESTIMATES DIVISION, FAS, USDA

TABLE 8

NOTE: The table below presents a 8-year record of the difference between the August projections and the final estimates. Using world wheat production as an example, changes between Aug. projections and the final estimates have averaged 14.5 million tons (2.9 percent) and ranged from -32.1 to 10.7 million tons. The August projection has been below the final 4 times and above the final 4 times.

## RELIABILITY OF PRODUCTION PROJECTIONS

COMMODITY AND REGION	PROJECTION AND FINAL ESTIMATES, 1981/82 – 1988/89 1/					
	Difference		Lowest	Highest	Below Final	Above Final
	Average	Average	Difference			
	Percent	--- <i>Million Metric Tons</i> ---			Number of Years 2/	
<i>WHEAT</i>						
World	2.9	14.5	–32.1	10.7	4	4
U.S.	1.5	1.0	–1.8	2.0	4	4
Foreign	3.4	14.7	–31.1	12.0	4	4
<i>COARSE GRAINS 3/</i>						
World	1.7	13.2	–22.5	26.9	5	3
U.S.	5.7	10.2	–16.7	30.6	5	3
Foreign	1.7	9.6	–21.5	13.8	3	5
<i>RICE (Milled)</i>						
World	2.6	7.8	–24.4	3.5	5	3
U.S.	4.9	0.2	–0.4	0.3	5	3
Foreign	2.6	7.9	–24.7	3.8	5	3
<i>SOYBEANS</i>						
World	2.5	2.2	–2.0	5.0	3	5
U.S.	5.4	2.7	–3.8	5.7	2	6
Foreign	5.8	2.3	–3.3	3.3	4	4
			--- <i>Million 480-lb. Bales</i> ---			
<i>COTTON</i>						
World	4.1	3.2	–11.1	5.5	5	3
U.S.	5.6	0.7	–1.9	1.0	5	2
Foreign	3.9	2.6	–10.7	4.5	5	3
UNITED STATES			----- <i>Million Bushels</i> -----			
<i>CORN</i>	6.4	362	–599	1071	4	4
<i>SORGHUM</i>	6.2	46	–82	83	6	2
<i>BARLEY</i>	3.1	16	–13	46	3	5
<i>OATS</i>	5.3	22	–26	57	4	4

1/ The final estimate for 1981/82-1987/88 is defined as the November estimate following the marketing year and for 1988/89 last month's estimate.

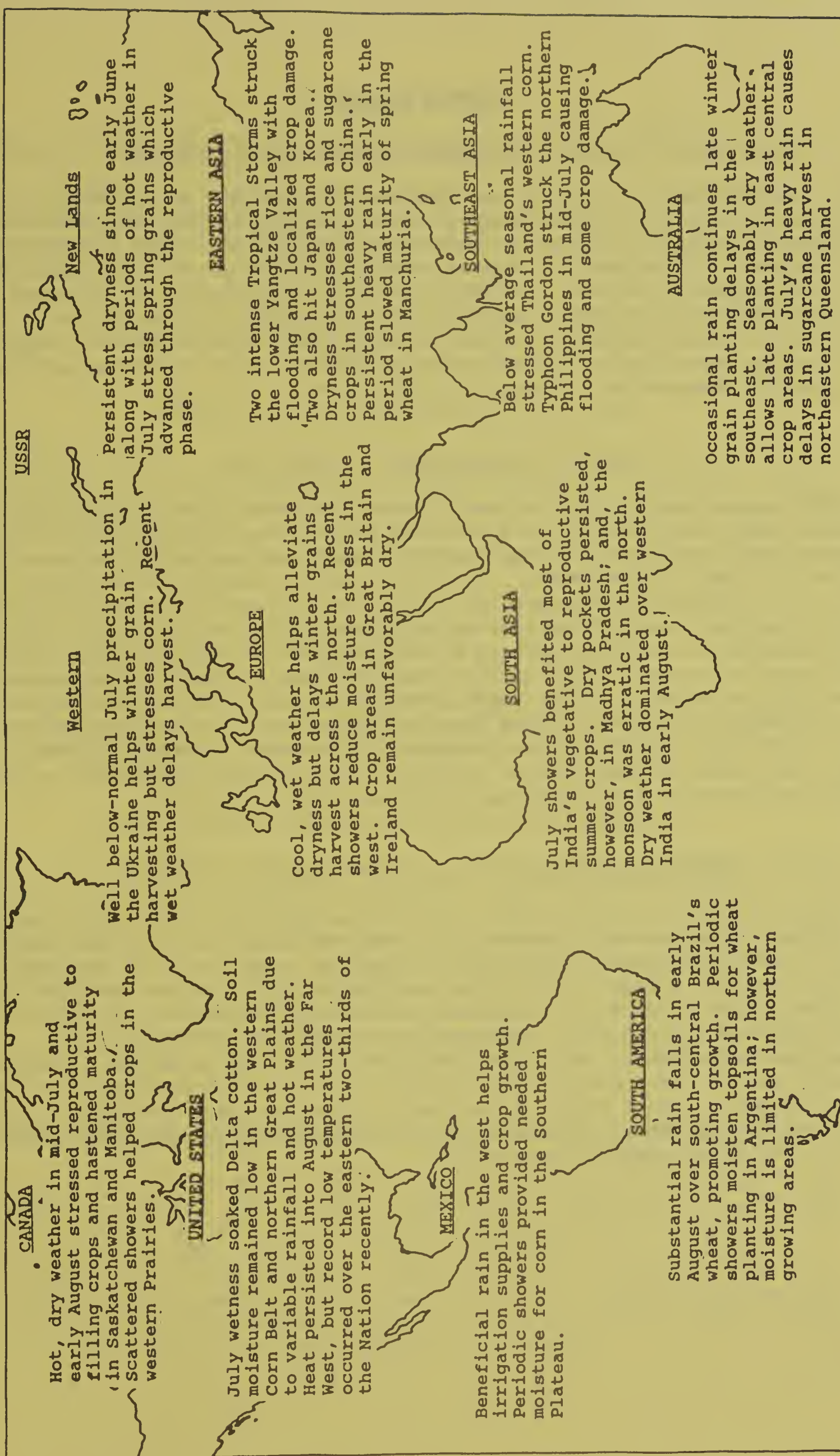
2/ May not total eight if projection was the same as the final.

3/ Includes corn, sorghum, barley, oats, rye, millet, and mixed grain.

# WORLD AGRICULTURAL WEATHER HIGHLIGHTS

Date August 10, 1989

NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY



(More details are available in the Weekly Weather and Crop Bulletin. Subscription information may be obtained by calling (202) 447-7917).

## WEATHER BRIEFS

### SPOTTY RAIN IN SOUTH AMERICAN WINTER GRAIN REGIONS

Timely and near normal rainfall has benefited Argentina's winter wheat region in Buenos Aires province and parts of neighboring provinces. Seasonable rain has fallen from seeding in May through vegetative growth stages in July and early August. Generally mild temperatures appeared to also favor growth of wheat and rangeland grasses. In sharp contrast, Uruguay and the southern Brazilian states of Rio Grande do Sul, Santa Catarina, and Parana have received little rain since April, and in some areas since mid-1988. Wheat and range grasses have likely been severely stressed by this lack of moisture and the same mild temperatures observed in Argentina.

### UNEVEN MONSOON RAINS IN SOUTH ASIA

The 1989 monsoon during July and early August has been less favorable for crops in many parts of South Asia than the nearly ideal 1988 monsoon. Northern India from western Uttar Pradesh through eastern Rajasthan reported well below normal July rainfall. Satellite imagery analysis from August 4 showed crops in this primarily coarse grain area to be much less vigorous than at this time last year. Excessive rainfall in late July caused field and river flooding in northern Pakistan's Punjab region as well as in parts of Bangladesh and eastern India. A dry trend developed in parts of Indochina during July, especially central and southern Thailand. The monsoon improved crop conditions in southern India from Andhra Pradesh through Tamil Nadu with heavy rain in July easing previous dryness. Seasonable rainfall during August, the month of peak monsoon activity across much of South Asia, will be especially important this year due to uneven rainfall in July.

### UNFAVORABLY HOT AND DRY CANADIAN PRAIRIE PROVINCES

Episodes of hot, dry weather during July and early August diminished prospects for spring-planted crops in Canada's Prairie Provinces. Cool temperatures and timely rains had benefited these crops in May and June, but soil moisture reserves remained virtually nil after the 1988 drought. Unlike in 1988, rain has fallen on most of these crop areas in Alberta, Saskatchewan, and Manitoba during July and early August. However, the timing and amounts of this rainfall were inadequate for crops lacking soil moisture reserves. Southern and southeastern Saskatchewan seemed hardest hit by recent hot weather. Crops in central and northern areas of the Prairie Provinces were probably in better condition, having received variable, but generally heavier and more timely rainfall and more moderate temperatures.

## PRODUCTION BRIEFS

### FEDERAL REPUBLIC OF GERMANY: CHERRY PRODUCTION LOWER THAN ANTICIPATED

Preliminary assessments indicate that the 1989 cherry crop in West Germany will be significantly smaller than the volume harvested in 1988 due to unseasonably cold weather during blossoming and above normal infestations of monilinia (brown rot). Production of sweet cherries is expected to be down 20 percent from the 128,500 tons harvested last season. An even greater shortfall is being projected for sour cherries due to increased grubbing of trees during the past year. Production for 1989 is currently forecast at 78,000 tons, 25 percent below the 1988 volume of 104,095 tons.

### SWEDEN: FIRE BLIGHT AFFECTS PEAR TREES

A recent survey of pear producing areas in southern Sweden revealed that fire blight (*Erwinia amylovora*) has begun to spread throughout the region. This bacterial disease is usually transmitted via the tree's root system, but can also be transmitted by birds, insects, wind, or contaminated tools. The most effective method of eradication is to cut down the trees and remove the roots.

Although the disease is fairly common in Denmark and other countries surrounding the Baltic Sea, this is the first time the Plant Protection Service has found evidence of widespread fire blight in Sweden. Initial reports indicated the disease was concentrated in a small area on the west coast of Sweden where approximately 300 pear trees were infected. Further investigation verified that the infection was prevalent in several other growing areas, including a major orchard located outside Malmo. Efforts continue to assess the extent of the outbreak.

### USSR: SLOWER GROWTH IN LIVESTOCK OUTPUT REPORTED

State and collective farms which account for the majority of Soviet livestock production, report slower growth in livestock output during the first 6 months of 1989 compared with the first half of 1988. Meat production, on a live-weight basis, was 10.8 million tons, up 2 percent compared with 4 percent growth last year at this time. Similarly, milk production was reported at 44.4 million tons, up 2 percent compared with 5 percent growth last year. Egg production was 31.5 billion, unchanged from January-June 1988, which was up 5 percent. July 1 livestock holdings were reported at 95.8 million head for cattle, down 2 percent; hogs at 59.3 million head, up 1 percent; while poultry holdings were unchanged.

### CHINA: HIGH FEED PRICES CAUSE SLOWER GROWTH IN THE LIVESTOCK SECTOR

In China, for the first 6 months of 1989, growth in livestock production has been considerably slower than in 1988. January-June output of pork, the major meat, was 8.57 million tons, up 4.4 percent compared with a 9.9 percent rate of growth for all of 1988. Output of beef, at 301,000 tons, was up 10.2 percent compared with 19.9 for 1988. Output of mutton, at 220,000 tons, was up 11 percent, a rate essentially the same as in 1988. Output of milk was 1.48 million tons, up 6.9 percent compared to growth of 10.9 for 1988. High feed prices were cited as the cause of the slower growth.

#### URUGUAY: DROUGHT IS FORCING CATTLE HERD REDUCTION

Drought has caused serious problems for cattle in Uruguay. The drought which started in mid-1988 continues in some regions. A shortage of hay and pasture and weak domestic beef prices are expected to cause cattle numbers to fall 14 percent to 9.07 million head by the end of 1989. Cattle slaughter for 1989 is projected at 1.8 million head or 300,000 head above the 1988 level with beef production at 346,000 tons compared with 321,000 tons in 1988. Beef production for 1990 is forecast to drop back to 330,000 tons with cattle numbers expected to increase over 4 percent.

#### SPAIN: HAILSTORMS DAMAGE DECIDUOUS FRUITS

During the weekend of August 5-6, heavy rain and hailstorms pummeled the leading deciduous fruit producing area in northeastern Spain. Hailstorms caused most of the damage which, reportedly, was localized in relatively minor growing areas of Lerida, Zaragoza, and Huesca. In Lerida, approximately 3,000 hectares were affected, with losses estimated at 25-35,000 tons of fruit. Pears apparently sustained the most damage, followed by apples and peaches. In Zaragoza, losses ranged from 10-70 percent of the fruit crops. Minimal losses were reported in Huesca. Initial USDA forecasts for Spain's 1989/90 deciduous fruit crops will be released in October 1989.

#### FRANCE: DRIED PRUNE SITUATION

Unusually dry weather and an off-year in the alternate bearing cycle is expected to limit France's 1989/90 dried prune pack to 26,000 tons, 37 percent below last year's record production volume of 41,000 tons. Although it is still too early to accurately predict quality and fruit size, it is known that the hot, dry summer was not conducive to fruit formation. Preliminary assessments seem to indicate, however, that the average prune size this season will be greater than last year.

## Thailand: Rice Field Travel Observations

The following report comes from the U.S. agricultural attache in Bangkok. The report is based on field travel to second-season rice areas during late July.

### MAIN OBSERVATIONS:

- Dry season production is up nearly 15 percent from 1988. The increased output is attributed to attractive prices and increased water availability.
- Fertilizer use is up 5 to 10 percent this year.
- A new variety, Suphan-60, is likely to dominate dry-season production within 2 to 3 years. It currently accounts for about 10 percent of planted area.
- Some upland areas are shifting to short-season varieties for the main season crop.
- The quality of the current crop is generally good, though clouds and rain are affecting late harvested fields.
- Higher profits have led to increased use of tractors and mechanized threshers. Some field combines were observed.

### FIELD NOTES:

SARABURI - About two-thirds of the crop was harvested. Area is up sharply due to a favorable irrigating schedule (some fields receive water from the Chao Phraya irrigation network only in alternating years). Yields are up an estimated 10 percent as a result of ample water supplies and heavier applications of fertilizer. Farmers report 650-700 kilograms per rai (one hectare equals 6.25 rai). Crop quality is good as most paddy was harvested during a recent dry spell. The major rice varieties are still RD7 and 23; Suphan-60 was introduced this year, but little seed was available. Early maturing (short-statured) varieties are unlikely to be grown during the main season as most producing areas are prone to flooding. The price of second crop rice has fallen from 4,600 to 4,200 baht per ton in the last week due to reduced demand and difficulty in drying grain because of cloudy weather. Last year's main-crop rice is bringing 5,100 baht/ton, and fragrant rice is bringing 6,000 baht per ton. The planting of the 1990 main crop has not yet started because the rains are delayed.

LOPBURI - The dry season crop is 90 percent harvested. Yields are good, but area is down 20 percent due to the Chao Phraya irrigation schedule.

NAKHON SAWAN - The harvest is in full swing. The extension office estimates that area is up by 70 percent due to attractive prices and improved access to water (55 percent of seedings are in areas irrigated through the public system--the rest are dependent upon wells and pumping from rivers). Officials put average yields at 750 kilograms per rai, slightly higher than a year ago, while interviewed farmers report 800-1,000 kilograms. There has been a slight increase in fertilizer use, but most farmers claim that application of more than 50 kilograms per rai gives no further increase in yield, while adversely affecting grain quality. Dominant varieties are RD7 and 1, but RD21 and 23 are also used. Suphan-60 is being introduced, although it currently occupies less than 5 percent of seeded area. As usual, some short-season rice will be planted on uplands for the main crop, but most areas need longer-stemmed varieties to tolerate flooding. Farmers are getting baht 4,000 for 20 percent moisture paddy. The growing prosperity of Nakhon Sawan, and most of the Central Plains, is reflected in the virtual displacement of water buffalo by Japanese power tillers and the pervasive use of mechanical threshers, which are available on a custom basis for baht 100 per ton. Several small combines were observed on this trip, rendering obsolete the long-standing claim that the entire Thai paddy crop is cut by hand. Farmers also are leveling land, building dikes, and making other improvements. Early main-season rains have been sporadic and poorly distributed, delaying seedings.

CHAINAT - The harvest is only about half completed. The extension office reports that area is up 17 percent and average yields are up 30 percent to 780 kilograms per rai (interviewed farmers report 900). The yield increase is attributed to more water and the absence of "rust." Dominant varieties are RD7, 21, and 23. About 10,000 rai, or 3.5 percent of the area, are planted to Suphan-60. Farmers like its disease resistance and high test weight. A newly established paddy market is paying 4,200 baht for 14-15 percent moisture, with 50 baht off for each additional point. One manager estimates that the crop in this area is up 30 percent. Some farmers are growing more short-season varieties and buying main crop for home consumption.

UTHAI THANI - The harvest is 80 percent completed. Second-crop area is up nearly 60 percent to 32,500 rai according to the extension office. This is due to release of water from a new dam with a capacity of 1,080 million cubic meters. Based on preliminary field reports, yields are estimated at 620 kilograms per rai compared with less than 500 last year. Farmers plant mainly RD7, but the government distributed 20 tons of Suphan-60 to farmers who lost their main-season crop to floods. This can seed 1,000 rai. Millers claim that second-crop production is up about 30 percent. One high-quality parboiler is paying a premium of 200 baht per ton for Suphan-60 because of its better milling qualities (higher head yield and an appearance identical to top quality main crop).

PHITSANULOK - The peak of the harvest was in June. Traders and millers estimate second-crop production in Phichit/Phitsanulok increased 15 percent, compared with a 20-percent increase the previous year. Irrigated areas, about 40 percent of the total, have gone to five crops in 2 years making it difficult to distinguish main from second crop. Some concern was expressed over the long-term effect of continuous cropping on soil fertility and disease problems. Upland farmers also are moving to short-season varieties for the main crop. Although prices have spurred plantings, not much change in varieties or fertilizer use was evident. RD7 continues to be the dominant variety. Rainfall has been adequate and regular, and the main-crop is off to a good start.

SINGBURI - The harvest is just peaking. Area is down 5 to 10 percent due to the alternating Chao Phraya schedule, but yields are a bit higher (extension office estimates 700 kilograms per rai). RD23 dominated seedings until last year when disease problems caused a switch to RD7; only a few hundred rai of Suphan-60 were planted.

SUPHANBURI - The dry-season area is up 86 percent to 972,000 rai due partly to reseedling of short-season varieties on 240,000 rai lost to main-season flooding. Three districts are now planting three crops per year, and about 30 percent of the area is under Suphan-60. The director of the Regional Rice Research Institute in Suphanburi was surprised by very favorable reactions to Suphan-60 on the part of both farmers and millers. This variety was bred mainly for resistance to blast, and trials at an experiment station did not indicate that it would out-yield RD7 (which also was developed at the Institute) and other popular dry-season varieties. However, under field conditions it reportedly produces 10-25 percent more grain. Suphan-60 also is considered very palatable, and its appearance permits blending with high-quality, main-season varieties. It has the same length of maturity as RD7, 21, and 23. It was derived from three lines--two Filipino (C-4 and IR-48) and one native variety.

KANCHANABURI - The harvest is nearly completed. Area is up 10 percent due to attractive prices and ample water. Some short-season varieties will be planted on high ground for November harvest.

RATBURI - Increased production by an estimated 30 percent in Ratburi and Nakhon Pathom is attributed to stronger prices and more water.

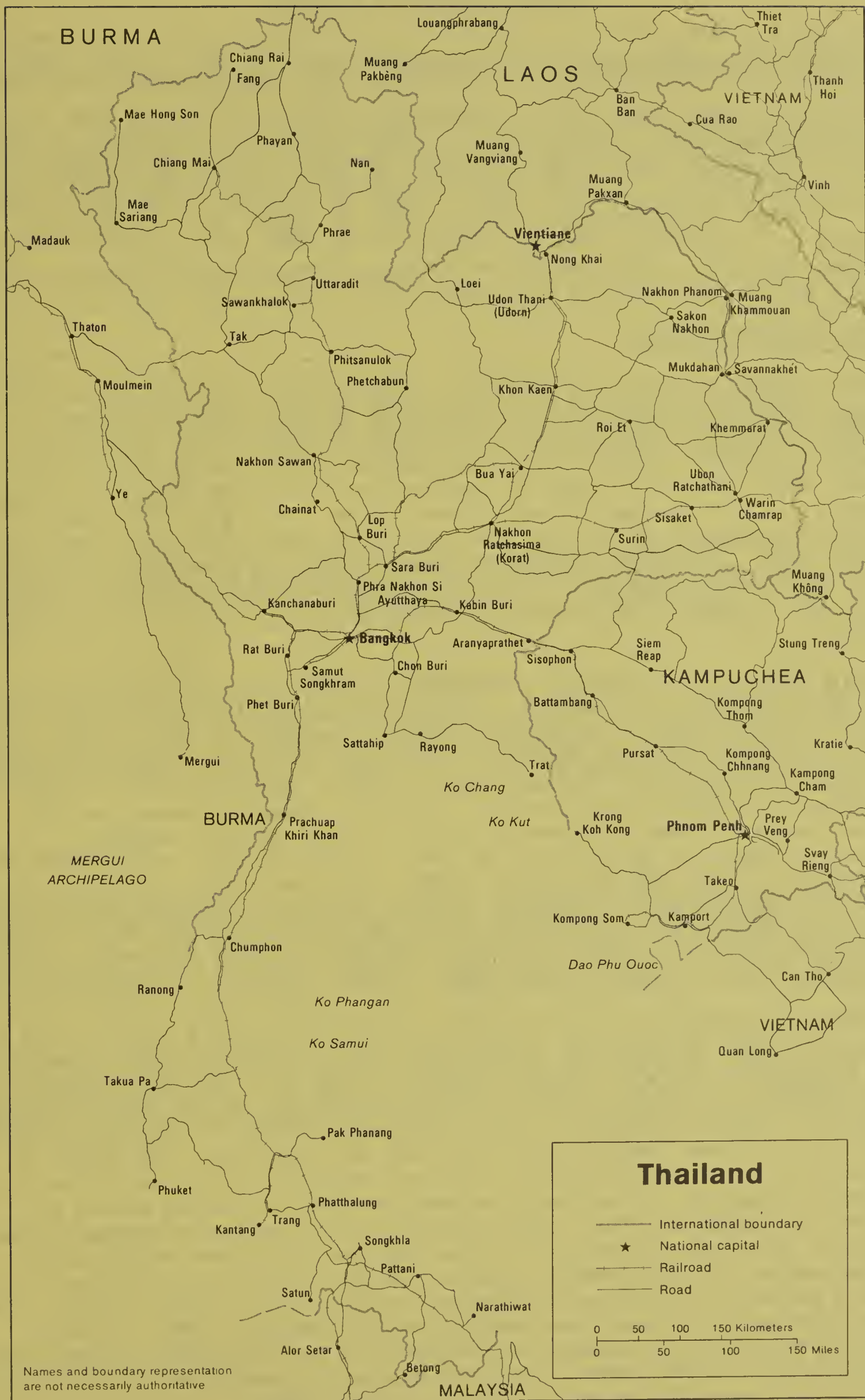
CHACHOENGSAO - The second-crop is harvested mainly from March through May and the main crop from October through December. Dry-season production was about the same as last year with reduced yields offsetting slightly larger seedings. The extension office claims that fertilizer use is trending down and lack of water is a problem in some areas. The province tried triple-cropping for 2 years, but discontinued it because of disease problems and increased "chalkiness" of kernels. The dominant variety is RD25, but RD7 and 23 also are used. Suphan-60 now occupies about 15 percent of the second-crop area. Farmers will continue to use KTH, KDML-105, and some RD varieties for the main crop.

PRACHINBURI - The second-crop was harvested in May. Area reportedly declined by 15-20 percent due to competition from beans. However, yields increased as farmers pumped more river water onto their fields. RD7 is the most popular dry-season variety--Suphan-60 does not do well here. About 10 percent of the main-season crop will be harvested in October and the rest in December and January.

ANG THONG - About 80 percent of the dry season crop is harvested. Area is down 25 percent because of alternating access to Chao Phraya water. However, preliminary reports show that yields are up 6 percent to about 700 kilograms per rai due to greater water availability and slightly increased fertilizer use. RD23 is the most popular variety, while Suphan-60 occupies less than 1 percent of the total area. There is limited ability to go with short-season varieties for the main crop because most land is low and favors floating rice.

AYUTTHAYA - The extension office lists second-crop area down 8 percent, but with slightly higher yields. Farmers also report better yields. Paddy is bringing 4,400-4,500 baht per ton, if dry.

PATHUM THANI - The second crop is slightly smaller than last year's. Farmers are now cutting the third crop on 5,000 rai. This year, most farmers reportedly will switch to short-season varieties for the main crop to be harvested November. The second crop will be harvested in April, and the third crop in July. First and second crops will be the same size, and the third crop half as large. No increase in fertilizer use is evident. Some paddy land is now being usurped for industrial purposes and higher-value crops.



## FEATURE COMMODITY ARTICLES

### WORLD POULTRY MEAT PRODUCTION CONTINUES TO GROW IN 1989, BUT EGGS DECLINE

World poultry meat production is forecast to total 31.1 million tons in 1989, 3 percent above 1988. Faster growth, around 4 percent, is forecast for 1990. Broiler production, the largest component of total poultry meat production is forecast to total 23.1 million tons in 1989, up 3 percent from 1988. Growth near 5 percent is forecast for 1990. Output of turkey meat in 1989 is forecast at 3.3 million tons, up 4 percent from 1988, with growth of 5 percent forecast for 1989. World production of eggs, forecast at 393 billion, is down about 1 percent in 1989, but full recovery is forecast for 1990.

#### Broiler Meat Production

Broiler output in the United States is expected to be 7.8 million tons, up 6 percent, in 1989 as producers take advantage of continuing favorable broiler-feed price relationships. A slightly faster rate of growth is forecast for 1990. Growth in Canadian broiler production is forecast to slow to less than 1 percent in 1989 in response to The Chicken Marketing Agency's attempts to limit production and improve prices. Mexico's 1989 output of broilers is forecast at 540,000 tons, 10 percent above 1988 which was sharply up from 1987. Increased consumer purchasing power and consequent stronger demand due, at least in part, to the Government's economic program, is given credit for the production increase. Growth of over 10 percent, is forecast for 1990.

In South America, 1989 broiler production in Brazil is forecast at 2 million tons, up 4 percent. A 5-percent increase is forecast for 1990. Brazil's current economic plan has resulted in market shortages of beef and pork which are stimulating demand for poultry. Production for export rebounded somewhat in 1989 but is expected to shrink again in 1990. Deteriorating economic conditions in Argentina are having a significant negative impact on the broiler industry there. Following years of steady growth, Argentine production peaked at 380,000 tons in 1987, fell to 340,000 tons in 1988, and is forecast at only 290,000 tons in 1989. Output may start to recover in 1990. Venezuela's poultry industry is also in a sharp downward cycle because removal of subsidies on imported feed ingredients has sharply raised costs, putting producers in a severe cost-price squeeze. Output in 1989 is forecast at 225,000 tons, 40 percent below 1988. A small recovery is forecast for 1990.

EC broiler production is forecast at 4.3 million tons, up 1 percent from 1988. A 2-percent rate of growth is forecast for 1990. French broiler production is up 2 percent in 1989 with similar growth expected for 1990. Both domestic and export demand are growing slowly. Broiler production in the Netherlands is expected to expand 2 percent in 1989, but little change is expected in 1990. Dutch producers and slaughtering plants are both reported to be facing a period of tight or negative profit margins. Broiler production in the United Kingdom is expected to increase 1 percent in 1989, but faster growth is forecast to resume in 1990. The salmonella scare, mainly affecting the egg market in late 1988 and early 1989, has had some spill-over effect on the broiler market, hurting demand. Italian broiler production is forecast up about 2 percent in 1989, but is forecast to show little change in 1990. Fears about hormones in red meat are boosting poultry demand in 1989. Broiler production in Spain is forecast at 750,000 tons for both 1989 and 1990, down slightly from the 1988 level. Producer prices are considered profitable but imports have been meeting most of the increased demand.

Broiler production in Eastern Europe is down slightly in 1989 but may recover in 1990. Most of the 1989 decline is in Hungary and Yugoslavia, traditional exporters, where rising costs are pricing poultry out of both the domestic and export markets. Poland's 1989 production of broilers is forecast at 240,000 tons, up 14 percent as the Government is expected to give the industry special feed allocations to help alleviate meat shortages. Total 1989 poultry meat production in the USSR is forecast at 3.3 million tons, up 2 percent, a rate somewhat slower than common in recent years. Short supplies of quality feeds and poor genetics are listed as the cause of the slow growth.

Japan's broiler production is forecast at 1.3 million tons for both 1989 and 1990, down about 1 percent from the 1988 level. Despite growing domestic consumption Japanese producers are having difficulty matching the price of imported broilers. Rapid growth in both export and domestic markets is expected to stimulate 1989 and 1990 production increases of about 10 percent per year in Thailand. Good prices at the start of 1989 are expected to stimulate a 5-percent increase in Taiwan's broiler production, but high feed and labor costs are forecast to preclude any production increase in 1990.

### Turkey Meat Production

World turkey meat production is forecast to grow 4 percent in 1989. U.S. producers, responding to continued growth in consumption, are forecast to produce 1.9 million tons in 1989 and just over 2 million tons in 1990. EC production is forecast at 1 million tons in 1989 and 1.1 million in 1990. France, the largest EC producer is forecast to produce 345,000 tons in 1989 and 355,000 in 1990. Continued increases in productivity are helping the French industry maintain its rapid growth. A March-April price recovery should help the UK continue its pattern of expansion through 1990. Further expansion in domestic demand may help the Italian industry expand about 2 percent in 1989, but little growth in either production or demand is expected in 1990.

### Egg Production

World egg production is forecast down in 1989 reflecting declines in the United States and Europe and slow growth elsewhere. A recovery is forecast for 1990. U.S. production is forecast to decline 2 percent in 1989 reflecting the low egg prices of 1988. Mexico's production of eggs continues to trend downward reflecting efforts by the producers' association to create a better balance between supply and demand. Brazil's latest economic plan froze prices for eggs well below the level producers say is their cost of production, and that is causing a sharp production decline. However, recently announced measures raising egg prices may bring a production increase in 1990. Venezuela's 1989 egg production may be off by a third as a result of the feed price problems.

EC egg production in 1989 is forecast at 80.9 billion, down 2 percent with most of the decline in the UK due to consumer fears about the safety of eggs. Only a small EC recovery is forecast for 1990. Egg production for 1989 in East Europe is forecast down 2 percent with most of the declines occurring in Hungary. Production in the USSR, forecast at 86 billion for 1989, is up 2 percent with a similar rate of growth forecast for 1990. After years of steady growth, Japan's 1989 output of eggs is forecast to decline slightly in response to declining egg prices.

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Table 9  
TOTAL POULTRY MEAT PRODUCTION IN SELECTED COUNTRIES  
(In 1,000 Metric Tons)

COUNTRY/REGION	1985	1986	1987	1988 <u>1/</u>	1989 <u>2/</u>	1990 <u>2/</u>
Canada	608	628	646	656	660	674
Mexico	627	590	515	592	637	695
United States	7,865	8,262	9,105	9,428	9,984	10,722
NORTH AMERICA	9,100	9,480	10,266	10,676	11,281	12,091
GUATEMALA	42	52	74	78	83	88
Argentina	340	370	410	370	316	327
Brazil	1,530	1,680	1,865	1,997	2,079	2,178
Venezuela	363	366	413	373	226	242
SOUTH AMERICA	2,233	2,416	2,688	2,740	2,621	2,747
Bel-Luxembourg	159	169	172	186	189	191
Denmark	115	115	113	117	119	120
France	1,272	1,325	1,393	1,434	1,450	1,460
Germany, F.R.	357	376	389	411	418	420
Greece	146	146	148	150	150	152
Ireland	54	57	58	59	60	60
Italy	929	940	982	996	1,013	1,015
Netherlands	425	442	471	488	504	510
Portugal	159	162	197	205	208	214
Spain	810	759	790	829	822	821
United Kingdom	875	922	999	1,056	1,076	1,140
EC-12	5,301	5,413	5,712	5,931	6,009	6,103
Austria	71	73	75	75	76	77
Finland	20	22	27	28	31	33
Sweden	45	45	46	47	47	47
Switzerland	28	28	29	31	33	36
OTHER WEST EUROPE	164	168	177	181	187	193
Bulgaria	158	167	169	170	170	170
Czechoslovakia	175	176	181	211	212	215
Germany, D.R.	162	156	157	165	160	162
Hungary	405	445	470	465	470	482
Poland	290	332	343	347	380	380
Romania	450	455	425	370	365	365
Yugoslavia	297	329	323	330	315	310
EAST EUROPE	1,937	2,060	2,068	2,058	2,072	2,084
USSR	2,816	2,988	3,126	3,184	3,260	3,360
Iraq	221	239	172	250	270	280
Israel	180	152	157	178	178	175
Kuwait	19	19	19	20	21	21
Saudi Arabia	186	196	236	248	249	250
Syria	80	78	75	80	85	90
Turkey	108	119	221	236	253	268
UAE	12	14	14	14	14	14
Yemen (Sanaa)	52	67	70	80	85	87
MIDDLE EAST	858	884	964	1,106	1,155	1,185
EGYPT	170	160	150	135	130	140
SOUTH ARICA	505	484	534	597	632	655
INDIA	161	175	206	221	250	275
Hong Kong	38	42	40	35	34	35
Japan	1,395	1,421	1,465	1,471	1,455	1,455
Korea, Republic of	128	132	144	153	160	165
Philippines	210	220	215	235	260	285
Singapore	57	67	62	65	64	60
Taiwan	345	384	400	418	430	430
Thailand	393	431	464	498	545	590
OTHER ASIA	2,566	2,697	2,790	2,875	2,948	3,020
Australia	345	367	403	401	399	415
New Zealand	42	46	47	50	54	60
OCEANIA	387	413	450	451	453	475
WORLD <u>3/</u>	26,240	27,390	29,205	30,233	31,081	32,416

1/ Preliminary. 2/ Forecast. 3/ Total includes 51 countries.

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FOREIGN PRODUCTION ESTIMATES DIVISION, IAS/USDA

Table 10

BROILER MEAT PRODUCTION IN SELECTED COUNTRIES  
(In 1,000 Metric Tons)

COUNTRY/REGION	1985	1986	1987	1988 <u>1/</u>	1989 <u>2/</u>	1990 <u>2/</u>
Canada	472	488	531	537	540	550
Mexico	490	458	395	490	540	600
United States	6,242	6,494	7,073	7,339	7,819	8,414
NORTH AMERICA	7,204	7,440	7,999	8,366	8,899	9,564
Argentina	310	340	380	340	290	300
Brazil	1,490	1,620	1,800	1,947	2,024	2,125
Venezuela	321	331	375	370	225	240
SOUTH AMERICA	2,121	2,291	2,555	2,657	2,539	2,665
Bel-Luxembourg	125	136	139	150	155	158
Denmark	99	98	98	102	104	105
France	782	784	830	844	860	875
Germany, F.R.	215	221	228	229	230	233
Greece	133	124	133	132	132	134
Ireland	36	37	38	39	40	40
Italy	550	558	593	593	604	605
Netherlands	348	360	390	396	404	405
Portugal	133	139	165	169	170	174
Spain	745	689	725	757	750	750
United Kingdom	650	700	760	801	810	860
EC-12	3,816	3,846	4,099	4,212	4,259	4,339
Austria	55	57	60	60	59	59
Finland	15	18	23	24	27	28
OTHER WEST EUROPE	70	75	83	84	86	87
Czechoslovakia	155	158	162	184	185	188
Germany, D.R.	93	93	94	98	96	97
Hungary	340	365	400	368	361	370
Poland	150	185	192	210	240	240
Romania	355	365	330	300	290	290
Yugoslavia	237	263	260	265	252	248
EAST EUROPE	1,330	1,429	1,438	1,425	1,424	1,433
USSR	1,510	1,620	1,720	1,760	1,820	2,000
Iraq	210	227	163	238	257	266
Isreal	130	100	101	114	115	115
Saudi Arabia	186	196	236	248	249	250
Turkey	75	85	130	150	170	190
MIDDLE EAST	601	608	630	750	791	821
EGYPT	130	110	100	75	70	75
SOUTH AFRICA	405	398	448	512	547	570
Hong Kong	24	29	29	24	23	24
Japan	1,270	1,297	1,340	1,346	1,330	1,330
Singapore	47	57	52	55	54	51
Taiwan	254	287	286	316	330	330
Thailand	393	431	464	498	545	590
OTHER ASIA	1,988	2,101	2,171	2,239	2,282	2,325
AUSTRALIA	315	334	349	360	359	372
WORLD <u>3/</u>	19,490	20,252	21,592	22,440	23,076	24,251
<u>1/</u> Preliminary. <u>2/</u> Forecast. <u>3/</u> Includes 39 countries.						

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Table 11

TURKEY MEAT PRODUCTION IN SELECTED COUNTRIES  
(In 1,000 Metric Tons)

COUNTRY/REGION	1985	1986	1987	1988 1/	1989 2/	1990 3/
Canada	102	105	115	119	120	124
Mexico	40	28	25	14	12	10
United States	1,334	1,484	1,736	1,800	1,883	2,018
NORTH AMERICA	1,476	1,617	1,876	1,933	2,015	2,152
BRAZIL	40	60	55	50	55	53
Belgium-Luxembourg	7	7	6	6	5	5
Denmark	3	4	3	2	2	3
France	253	293	308	332	345	355
Germany, F.R.	60	72	79	96	102	110
Greece	3	3	3	3	3	3
Ireland	15	16	16	16	16	16
Italy	232	237	242	250	255	255
Netherlands	18	23	26	29	33	30
Portugal	19	19	28	28	30	32
Spain	19	19	20	21	23	23
United Kingdom	168	180	200	210	220	230
EC-12	797	873	931	993	1,034	1,062
Poland	9	14	15	15	15	15
Yugoslavia	23	17	15	15	14	14
EAST EUROPE	32	31	30	30	29	29
USSR	100	105	110	115	120	130
ISRAEL	40	42	46	55	55	52
WORLD 3/	2,485	2,728	3,048	3,176	3,308	3,478
1/ Preliminary. 2/ Forecast. 3/ Total Includes 20 Countries.						

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FOREIGN PRODUCTION ESTIMATES DIVISION, IAS/USDA

Table 12

EGG PRODUCTION IN SELECTED COUNTRIES  
(In Million Pieces)

COUNTRY/REGION	1985	1986	1987	1988 1/	1989 2/	1990 2/
Canada	5,855	5,898	5,706	5,721	5,450	5,340
Mexico	18,092	18,563	16,685	15,040	14,570	14,100
United States	68,256	68,460	69,628	69,253	67,799	69,240
NORTH AMERICA	92,203	92,921	92,019	90,014	87,819	88,680
Argentina	3,150	3,200	3,300	3,300	3,200	3,250
Brazil	11,800	13,000	15,400	14,850	13,660	14,750
Venezuela	2,736	2,691	2,585	2,700	1,900	2,000
SOUTH AMERICA	17,686	18,891	21,285	20,850	18,760	20,000
Bel-Luxembourg	3,005	2,935	2,908	2,830	2,800	2,768
Denmark	1,370	1,398	1,316	1,366	1,400	1,350
France	14,910	14,970	14,540	15,300	15,100	15,100
Germany, F.R.	13,150	12,765	12,315	12,280	12,100	12,200
Greece	2,512	2,496	2,480	2,485	2,490	2,400
Ireland	650	640	640	640	640	640
Italy	10,900	10,300	10,743	11,234	11,350	11,350
Netherlands	11,051	10,930	10,930	10,840	10,720	10,800
Portugal	1,399	1,428	1,587	1,633	1,698	1,783
Spain	10,164	10,877	10,500	10,856	10,600	10,700
United Kingdom	13,117	13,150	13,300	13,500	12,010	12,250
EC-12	82,228	81,889	81,259	82,964	80,908	81,341
Austria	1,798	1,832	1,818	1,757	1,687	1,636
Finland	1,495	1,426	1,370	1,304	1,258	1,230
Switzerland	760	753	690	708	711	710
OTHER WEST EUROPE	4,053	4,011	3,878	3,769	3,656	3,576
Bulgaria	2,781	2,820	2,846	2,850	2,850	2,850
Czechoslovakia	5,499	5,558	5,544	5,596	5,600	5,625
Germany, D.R.	5,596	5,634	5,680	5,680	5,700	5,700
Hungary	4,228	4,290	4,237	4,695	4,250	4,250
Poland	8,636	8,303	7,966	8,103	8,000	8,300
Romania	7,866	7,900	8,000	7,650	7,600	7,620
Yugoslavia	4,692	4,770	4,922	4,972	4,850	4,820
EAST EUROPE	39,298	39,275	39,195	39,546	38,850	39,165
USSR	77,255	79,892	81,917	84,069	86,000	88,000
Iraq	1,229	1,636	1,350	1,900	2,000	2,100
Israel	2,103	1,760	1,674	1,902	1,840	1,820
Saudi Arabia	2,400	2,490	2,071	2,765	2,775	2,775
Turkey	5,700	5,900	6,100	6,100	6,200	6,300
MIDDLE EAST	11,432	11,786	11,195	12,667	12,815	12,995
Egypt	2,400	2,200	2,100	1,800	1,500	1,600
Algeria	1,675	2,200	2,875	3,200	3,400	3,550
NORTH AFRICA	4,075	4,400	4,975	5,000	4,900	5,150
SOUTH AFRICA	3,231	3,235	3,369	3,723	3,900	4,020
Hong Kong	30	41	44	40	41	40
Japan	35,700	37,080	39,567	40,137	40,000	40,000
Korea, Republic of	5,250	6,011	6,574	7,204	7,428	7,580
Taiwan	4,018	4,070	4,298	4,400	4,450	4,500
OTHER ASIA	44,998	47,202	50,483	51,781	51,919	52,120
AUSTRALIA	3,285	3,215	3,210	3,238	3,286	3,357
WORLD 3/	379,744	386,717	392,785	397,621	392,813	398,404

1/ Preliminary. 2/ Forecast. 3/ Totals includes 41 countries.

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## OILSEED PRODUCTION PROSPECTS IN THE SOVIET UNION

The Soviet Union is one of the world's leading oilseed producing countries, holding the number one position in sunflowerseed production and consistently ranking second or third in cottonseed output. Total oilseed production in 1989/90 is estimated at 12.5 million tons, down about 2 percent from last year's record output. Output of most major oilseeds is expected to increase this year, in line with larger area and Government efforts to improve yields. A decline is forecast for cottonseed, however, because of decreased planted area and damage from a killing frost in May.

Over the long run, Soviet oilseed production is expected to continue rising as the Government tries to improve food supplies. The Soviet Government has committed itself to raising the supply of livestock products. Part of its plan to do so involves substantially improving the livestock feed base. Historically, livestock rations have been short of protein, relying heavily on grains and forages. To rectify this situation, agricultural authorities are trying to raise domestic oilseed production. Also, authorities note that current per capita consumption of vegetable oil is only 10.2 kilograms per year, 22 percent below their recommended dietary level of 13 kilograms.

Soybeans, sunflowerseed, and rapeseed have been targeted as the three oilseed crops to which most attention will be given for increasing production. Starting with the 1987/88 crop, Soviet procurement agencies began paying higher prices for oilseeds in order to encourage greater production. So far, this program appears to be having limited success. While oilseed production did grow, government procurements of 5.9 million tons last year still did not meet plan levels. The 1989/90 plan for procurements is 6.1 million tons.

### Sunflowerseed

Sunflowerseed is historically the most important oilseed crop in the USSR and likely will remain so. Soviet plant breeders were the first in the world to select and introduce into production sunflowerseed varieties having high yield, high oil content, and disease resistance, and later advances brought shorter season, early-ripening hybrids with high yields. The bulk of the sunflower crop is grown in the Central Black Soils Zone, the Ukraine, the North Caucasus, Moldavia and southern Russia east to the Urals.

Planted area of sunflower rose over 100,000 hectares in 1988/89, but is estimated to increase only slightly this year to 4.3 million hectares. With growing emphasis placed on other oilseeds (most notably rapeseed), it is estimated that sunflowerseed area will not increase significantly in the coming years. The need to maintain a strict rotation for sunflowerseed production in order to control disease problems, such as white and gray molds, places a constraint on the amount of additional area which can be brought into production. Furthermore, in the areas where sunflowerseed production is concentrated, it must compete with other profitable crops such as corn, sugar beets, and winter wheat. Even though planned production in 1989 is set at 6.5 million tons, this target seems ambitious for current area and yield prospects.

Intensive sunflowerseed research in new varieties and hybrids continues, although complaints persist about substandard seed. New hybrids and varieties have been sown on over 2 million hectares (almost two-thirds of planned area). However, planting of new hybrids varies significantly from region to region; in Moldavia, almost all the sunflowers grown are hybrids, while in the Ukraine only 27 percent of sunflowerseed area is planted to new varieties, and in the North Caucasus only 2 percent. Early maturing hybrids are slated to be sown on 30 percent of total area.

Because of its importance, sunflower commands a good share of inputs. Yields have improved noticeably in recent years and the Soviets hope to raise them even more by increasing area under intensive technology (IT), emphasizing the use of hybrids, and maintaining attractive procurement prices. Sunflower responds favorably to IT; for the country as a whole, fields under IT produce on average 16 percent more than fields cultivated in the usual fashion. Intensive technology was used on 2.2 million hectares (about 54 percent) in 1987/88, and the Soviets will try to increase its coverage. A shortage of herbicides continues to be a problem.

### Cottonseed

Cottonseed, which is grown in Central Asia, is the Soviet Union's second largest source of vegetable oil and its major source of oilmeal, but production data are not included in official statistics on oilseed production. (Cottonseed estimates are based on seed cotton and cotton lint production.) As a by-product of cotton fiber production, a leading agricultural export, cottonseed production is essentially dependent on Soviet fiber production policies.

Conditions in early 1989/90 appeared to promise a good harvest, however, at the end of April and the beginning of May, a major cold front hit the Central Asian republics. Snow storms and freezing cold damaged the cotton crop, resulting in lower production prospects this year despite a massive replanting effort.

Soviet specialists hope to keep yields increasing over the longer term through increased use of intensive technology. In this way, the Soviets hope that cotton production can remain steady. Republic and national officials are adopting a policy of removing land from cotton monoculture and establishing a cotton/alfalfa rotation or planting other crops. This is due to concerns about food sufficiency and ecological damage. Central Asian republics depend heavily on cotton production, to the point that their ability to produce food for the local population is severely hampered. Furthermore, cotton monoculture has caused severe soil problems, including heavy erosion, loss of fertility, and salinization.

### Rapeseed

Rapeseed is a non-traditional crop in the USSR, but with the development of low erucic acid varieties in other countries and the push to increase Soviet production of vegetable oil, officials are calling for increased rapeseed production. While 1988/89 production of 420,000 tons did not meet plan, it was four times the size of the 1986 crop. Soviet plans call for production of 1.3 million tons in 1989/90, 1.5 million tons in 1990/91, and 6 million tons by the year 2000 (on 6 million hectares). Realistically, these production goals can only be met by increasing both area and yields. The primary rapeseed production area is in the western Ukraine. It is also grown in that part of the eastern Black Soil zone south of Moscow.

As one of the "targeted" oilseeds, rapeseed is benefiting from intensive research. USSR Gosagroprom (the State Agro-Industrial Committee) created a scientific-production association called "Rapeseed" to help in this regard. However, rapeseed will require a high level of management to achieve the yields called for in current Soviet plans. As an example of one of the hurdles facing the Soviets, it has been estimated that in some places harvest losses approach 50 percent due to badly managed equipment.

Yields dipped in 1988/89, but are expected to return to more normal levels this year. Soviet plans call for varieties which produce 3-5 tons per hectare, versus the current average of 0.7 tons per hectare. Crop area is slated to rise to 6 million hectares by the year 2000, and area has shown substantial growth over the last few years. In 1988/89, of total area under rape, 182,000 hectares was winter rape and 425,000 hectares was spring rape. In an effort to improve rapeseed handling, the Ministry of Grain Products, the State procurement agency for grains and oilseeds, is preparing 372 "reception points" (equivalent to country elevators) to accept delivery of the oilseed.

### Soybeans

Soybeans are one of the three oilseed crops which have been targeted by the Government for major increases in production. The bulk of the soybean crop is grown in the Soviet Far East, primarily in Amur Oblast. A relatively small area is planted to soybeans in the Ukraine, but is increasing in line with that republic's plan to achieve average annual soybean production of 225,000 tons in this 5-year plan (1986-1990). Soybeans are also being sown after wheat in Azerbaidzhan. Although production is rising, planned procurements are still not being met. Soybean production is forecast to grow in the short-term as increasing interest and experience result in higher yields. As one of the "targeted" oilseeds, it is expected that soybeans will have a higher priority for inputs and applications of intensive technology. Currently, a good deal of research on different varieties is under way, and a large number of varieties are grown in the USSR.

### Flaxseed

Flaxseed area and production declined again in 1988/89. Of the 220,000 tons produced last year, 179,000 tons were from fiber flax and 41,000 tons from common flax. Output is estimated to rise marginally in 1989/90. However, flaxseed production is not expected to play a major role in the push for greater vegetable oil and oilmeal production.

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The following report is a summary of the annual oilseeds situation report from the U.S. agricultural attache in Moscow. For additional information contact Rod Paschal (202) 382-8881 or Keith Severin (202) 382-8880.

Table 13

USSR OILSEED AREA, PRODUCTION, AND YIELDS

MARKETING YEAR	HARVESTED AREA (1,000 Hectares)						PRODUCTION (1,000 MT)						YIELDS (MT Hectare)					
	SUN	COTTON	FLAX	RAPE	TOTAL		SUN	COTTON	FLAX	RAPE	TOTAL		SUN	COTTON	FLAX	RAPE		
	SEED	SEED	SEED	SEED			SEED	SEED	SEED	SEED			SEED	SEED	SEED	SEED	SEED	SEED
1972/73	4,394	2,735	1,460	905	5	9,499	5,048	4,085	413	258	7	9,811	1.15	1.49	0.28	0.29	1.40	
1973/74	4,745	2,742	1,470	838	15	9,810	7,385	4,363	407	424	12	12,591	1.56	1.59	0.28	0.51	0.80	
1974/75	4,686	2,879	1,410	822	11	9,808	6,784	4,531	388	360	8	12,071	1.45	1.57	0.28	0.44	0.73	
1975/76	4,045	2,924	1,403	811	13	9,196	4,990	4,807	340	780	9	10,926	1.23	1.64	0.24	0.96	0.69	
1976/77	4,534	2,950	1,361	762	14	9,621	5,277	4,511	337	480	16	10,621	1.16	1.53	0.25	0.63	1.14	
1977/78	4,574	2,992	1,362	786	14	9,728	5,904	4,609	300	540	15	11,368	1.29	1.54	0.22	0.69	1.07	
1978/79	4,558	3,038	1,339	815	14	9,764	5,333	4,669	250	634	15	10,901	1.17	1.54	0.19	0.78	1.07	
1979/80	4,334	3,090	1,212	838	11	9,485	5,414	4,411	254	467	8	10,554	1.25	1.43	0.21	0.56	0.73	
1980/81	4,353	3,147	1,266	854	20	9,640	4,618	5,082	196	525	14	10,435	1.06	1.62	0.16	0.62	0.70	
1981/82	4,235	3,168	1,057	864	59	9,383	4,678	5,279	165	491	29	10,642	1.11	1.67	0.16	0.57	0.49	
1982/83	4,250	3,188	1,126	876	100	9,540	5,341	5,094	150	536	47	11,168	1.26	1.60	0.13	0.61	0.47	
1983/84	4,266	3,192	1,173	842	144	9,617	5,063	3,980	259	560	69	9,931	1.19	1.25	0.22	0.67	0.48	
1984/85	3,907	3,347	1,159	772	109	9,294	4,527	4,760	248	469	55	10,059	1.16	1.42	0.21	0.61	0.51	
1985/86	4,053	3,316	1,100	738	123	9,330	5,260	5,100	201	465	74	11,100	1.30	1.54	0.18	0.63	0.60	
1986/87	3,848	3,475	1,053	745	144	9,265	5,258	4,870	233	703	110	11,174	1.37	1.40	0.22	0.94	0.76	
1987/88	4,156	3,527	1,069	783	407	9,942	6,075	4,485	228	712	296	11,796	1.46	1.27	0.21	0.91	0.73	
1988/89	4,280	3,450	1,039	760	607	10,136	6,157	5,019	220	880	420	12,696	1.44	1.46	0.21	1.16	0.69	
1989/90	4,300	3,300	1,100	780	770	10,250	6,300	4,578	230	800	560	12,468	1.47	1.39	0.20	1.03	0.73	

## PAKISTAN GRAIN PRODUCTION: SITUATION AND OVERVIEW

Pakistan's total grain production (including rough rice) for 1989/90 is estimated at a record 21.3 million tons, up 2.3 million or 12 percent from last year and up 33 percent from the late 1970's level. Most of the increase during the past 10 years has been in wheat production with both greater harvested area and yield. Output of rice, millet, sorghum, and barley has been relatively stagnant since 1980.

Food grain production is a significant part of Pakistan's agricultural economy--it represents roughly a third of total agricultural commodities produced by value. The marketing systems for the three major food grains (wheat, rice, and corn) vary somewhat due to their respective patterns of utilization, political sensitivity to consumer demand, and government controls. The Pakistan Government procures a sizable share of the wheat harvest in order to control the price of wheat in the open market, to support the farmgate price, and to provide subsidized flour to the poor. The government's official export agency procures about a third of rice output, while the marketing of coarse grains is generally left to the free market.

The southwest monsoon dominates Pakistan's climate, and almost three-quarters of the annual rainfall comes between late June and September. A minor wet season occurs from December to March with fall and spring being virtually dry. The climate is generally classified as dry with moderate winters and hot summers. Irrigation is necessary for most agricultural crops and more than 90 percent of sown area receives some irrigation.

Pakistan's total cultivated area is about 21.0 million hectares of which roughly 15.5 million hectares are under irrigation. The Indus River and its tributaries supply the bulk of Pakistan's irrigation water. The Indus Waters Treaty of 1960 shared these waters between India and Pakistan; India obtained the use of the eastern tributaries (the Beas, Ravi, and Sutlej Rivers) and Pakistan uses the waters of the Indus, Chenab, and Jhelum. Two large dams were constructed to conserve water during the "kharif" or summer growing season for use during the "rabi" or winter growing season. The Tarbela Dam is on the Indus River while the Mangla Dam is on the Jhelum River. These dams allow for a greater, more uniform flow during the wheat sowing season of October/November and enable farmers to use agricultural inputs, such as fertilizer, more effectively. The dams also control flooding.

The Indus Plains additionally have extensive groundwater aquifers that supply irrigation water through the use of tubewells and, to a lesser extent, Persian wheels. Extensive canal irrigation has strongly increased recharge of the aquifers and has led to a rise in the water table with concurrent problems of waterlogging and soil salinity. Surface irrigation remains the dominant system, however, with almost 40,000 miles of canal supplying more than 10.5 million hectares--two-thirds of the total irrigated area. Irrigated crops include wheat, rice, corn, pulses, cotton, and sugarcane. Barani (rainfed) areas are mainly in the north and northwest of Pakistan.

## Wheat

Wheat production for 1989/90 is estimated at a record 14.3 million tons, up 1.6 million or 13 percent from 1988/89. This year's crop, unlike the previous two, was sown under good conditions with normal irrigation canal flow and timely rains. The relative shortage of wheat in some rural areas and an increase in the government procurement price caused area to rise by more than 250,000 hectares this year. The procurement price was increased 3 percent to 85 rupees (\$1=R21) per maund (40 kilograms) or US\$202 per metric tons. Considering the increased cost of seed, fertilizer, labor, and electricity, the average cost of wheat production is estimated to have risen 7 percent this season. Water availability, however, is the greatest constraint in expanding wheat area, and it also directly determines crop size.

Punjab Province produces almost three-fourths of the total Pakistani wheat crop, followed by Sind Province with roughly 14 percent, and the balance coming from another two provinces. Almost all Pakistani wheat may be classified as winter semi-hard white. Wheat is planted in November/December and harvested in April/May. Barani wheat occupies 17 percent of total wheat area and produces about 10 percent of total output. Competition from other kharif and rabi crops has a relatively minor impact on wheat area due to the importance of wheat as a dietary staple. Delayed harvesting of cotton and rice reduces area and negatively affects wheat yields.

### Wheat Targets for 1989/90 1/

<u>Province</u>	<u>Area</u> (1,000 Ha)	<u>Yield</u> (MT/Ha)	<u>Production</u> (1,000 MT)
Punjab	5.40	2.02	10.93
Sind	1.03	2.31	2.38
NWFP	0.82	1.39	1.14
Baluchistan	0.29	1.90	0.55
Total	7.54	1.99	15.00

1/ Pakistan Government

The most critical period for wheat development in Pakistan is from mid-February to late March when the plants are booting, flowering, and in early grain fill stages. Insufficient rainfall means less water in the two major dams and has the dual effect of lessening water for irrigation and reducing the generation of electricity. Load shedding (temporary electrical blackout) is often severe in rural areas and many growers who rely on supplementary tubewells powered by electrically-driven motors are affected. Tubewell irrigation is roughly 10 times more expensive per unit of water than canal irrigation.

Although 83 percent of the wheat crop is irrigated, timely rains and adequate irrigation water supplies are essential for good harvests. Fertilizer supplies often bottleneck the system. Input supplies to farmers are often untimely and inadequate, or (as in this year) prices for wheat are too low for growers to afford recommended applications. Fertilizer use for the 1989 season is forecast at 982,000 nutrient tons versus 963,000 last year.

Over four-fifths of the Pakistani wheat area is sown to high-yielding varieties (HYV) and almost 100 kilograms per hectare of fertilizer nutrients are applied on average. Wheat is double-cropped with either rice, cotton, or maize, depending on the region. The rotation pattern often leads to delayed planting of wheat which has the effect of lowering final yields by as much as 40 kilograms per hectare for every day after the optimal planting date; this is due to the risk of high temperatures in the reproductive and grain-fill stages. The optimal period to plant wheat in all regions is from November 10-30. Delayed planting is most common in the wheat/cotton areas. Intercropping with sorghum, rapeseed, and mustard is prevalent particularly in the wheat and cotton areas.

There are several other problems affecting wheat yields. In many areas, particularly in the rice/wheat rotation, continuous cropping has led to serious weed and pest problems. From the farmers' point of view, however, "weeds" are usually highly prized as livestock fodder. The widespread planting of rust-susceptible varieties banned by the government has exacerbated wheat disease. Seed bed preparation is often poor and the use of irrigation water is often inefficient. Land preparation is poorest in the wheat/rice areas that have problems with compacted, puddled soils left after the rice harvest. Virtually all wheat is broadcast with seeding rates of about 100 kilograms per hectare. Fertilizer use during the rabi season grew rapidly during the 1970's, but has increased little since 1980. An adequate distribution system for certified seed and agricultural chemicals does not exist in many areas. Bank credit is not readily available to most growers. Extended family, friends, and merchants are more common sources of credit.

Although there is some disagreement, average yields and returns are perhaps highest in the wheat/maize regions and lowest in the wheat/rice areas. Yields are likely to remain near the present level in the near future. The relatively easy yield increases obtained from replacing traditional varieties with HYV's are virtually over, and per unit returns from fertilizer are diminishing. Poor crop diversification, rising cropping intensities, and the lack of agricultural research are major, long-term problems. There is an urgent need for new rust-resistant, early maturing wheat varieties and for greatly expanded extension services.

Virtually all farmers grow some wheat and most cultivate less than 5 hectares. Farm size is smallest in the wheat/maize area of the North-West Frontier Province (NWFP) and largest in the Punjab. Labor costs are high with rural wages reaching US\$2.00 per day during the harvest period. Wheat is normally harvested by hand and mechanically threshed.

Wheat is by far the dominant food grain in Pakistan and is consumed primarily in the form of unleavened bread made from ground wheat ("atta") rather than wheat flour. Farmers grow wheat primarily for their own use and the surplus, if any, is marketed. About two-thirds of the wheat harvest is sold in open markets, consumed by farmers directly, or kept as private stocks. The rest is procured by the government for sale to flour mills and for national stocks.

## Rice

Rice production for 1989/90 is estimated at 3.5 million tons, up 0.4 million or 13 percent from last year. Rice area and yield have been relatively stable since 1980; national average yield is significantly below the world average. In Pakistan the rice crop is planted in June/July and harvested in November.

The primary rice production areas are northeastern Punjab, northern Sind, and the Indus Delta. The kharif (monsoon) season in northeastern Punjab typically has warm days, partly cloudy skies, rain, and high humidity; northern Sind is often cloudless, with very hot days, and low humidity; and the Indus Delta has high humidity, some cloudiness, moderate winds from the Arabian Sea, and hot days.

Rice area is estimated up slightly this year and the trend of shifting area in the Punjab from International Rice Research Institute (IRRI) rice varieties to the high-yielding, high-priced Basmati (fragrant) varieties is continuing. This movement has been fueled by the introduction of the HYV Basmati 385 which is now seeded on 70 percent of total Basmati rice area. Basmati rice has traditionally yielded less than IRRI varieties due in part to its tall height and tendency to lodge when fertilized liberally. However, Basmati is preferred for eating, requires less inputs, may be sown after the beginning of the monsoons when more water is available, and produces more and higher value straw for use as livestock feed. Sind produces mainly HYV's and traditional cultivars, while Punjab grows primarily Basmati types.

The government has encouraged the production of IRRI rice and recently raised the procurement price by 10 percent versus a 6-percent increase for Basmati. IRRI rice is seen as a valuable foreign exchange earner and a sizable fraction of the IRRI rice grown in the Punjab is reportedly smuggled across the borders to India and Afghanistan.

Rice Area by Province and Type 1/

<u>Province</u>	<u>Basmati</u>	<u>IRRI</u>	<u>Other</u>	1984-1988 Mean Area <u>in 1,000 HA</u>
---Percent---				
Punjab	78	17	5	1,070
Sind	1	80	19	710
NWFP	20	20	60	70
Baluchistan	5	80	15	115
Pakistan	45	43	12	1,965

1/ Estimated by Foreign Production Estimates Division/IAS

The rice crop is transplanted by manual labor and workers are paid according to the area sown. This often leads to low population densities and reduced yields. The chronic labor shortage, which affects virtually all crops, often delays transplanting beyond the optimal date. Weeds are another problem and often cause yield reductions of 20-25 percent. Hand weeding is difficult considering the labor shortage and price/infrastructure constraints limit the use of herbicides. Pests, particularly the yellow and white rice stem borers (Tryporyza spp.), are quite damaging.

There are two distinct rice marketing channels in Pakistan. The farmer sells paddy rice to the mills in his vicinity. After milling, the mills consider the offer prices and sell either on the open market or to the Rice Export Corporation of Pakistan (RECP). RECP procures rice at the officially set procurement price, generally buying about one-third of total rice production.

### Coarse Grains

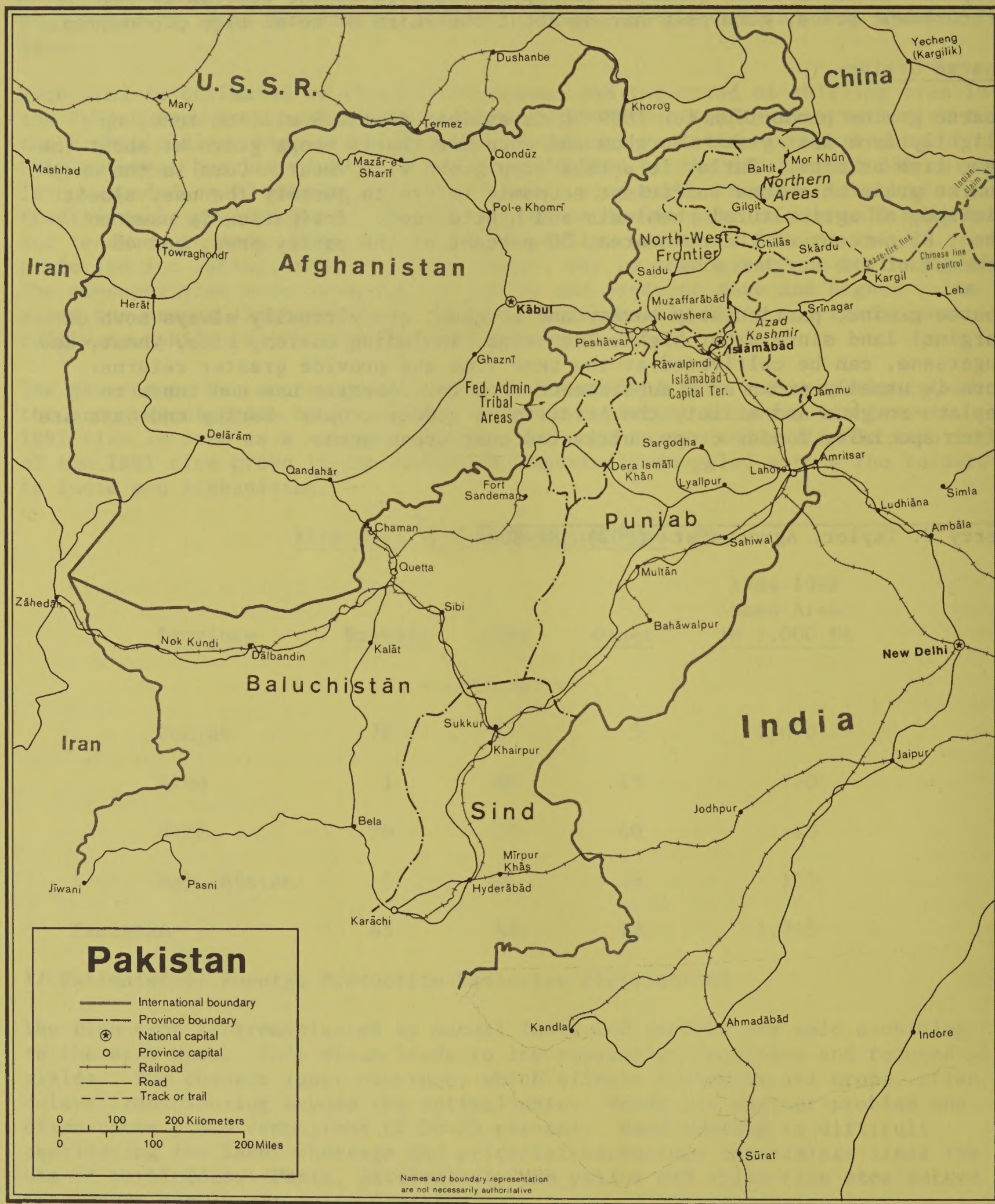
Coarse grains production for 1989/90 is estimated at 1.8 million tons, up slightly from last year. Sorghum and corn are kharif crops grown at about the same time as rice. Barley is a rabi crop grown with wheat. Corn is the only coarse grain which has sufficient economic return to justify the use, albeit limited, of agricultural chemicals and hybrid seed. Irrigation is used on about 85 percent of the corn area, 50 percent of the barley area, and 45 percent of the sorghum area.

Coarse grains, particularly barley and sorghum, are virtually always sown on marginal land since other high value crops, including cotton, rice, wheat, and sugarcane, can be cultivated at the same time and provide greater returns. Corn is usually grown as a subsistence crop for domestic use and tends to replace sorghum and millet, the traditional fodder crops. Barley and oats are often specialty fodder crops cultivated near urban areas.

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Map 3



Base 504018 1-79

# PAKISTAN GRAIN PRODUCTION

## 1980-1989

<i>Commodity</i>	<i>Area</i> (1000 Hectares)	<i>Yield</i> (Tons/Hectare)	<i>Production</i> (1000 Tons)
<b><u>Wheat</u></b>			
1980	6,924	1.57	10,857
1981	6,982	1.64	11,473
1982	7,223	1.57	11,304
1983	7,398	1.68	12,414
1984	7,326	1.49	10,882
1985	7,403	1.58	11,703
1986	7,363	1.89	13,922
1987	7,706	1.56	12,020
1988	7,308	1.73	12,675
1989 AUG	7,580	1.89	14,300
<b><u>Rice, Rough</u></b>			
1980	1,933	2.43	4,689
1981	1,976	2.61	5,150
1982	1,978	2.62	5,173
1983	1,998	2.51	5,013
1984	1,998	2.49	4,973
1985	1,863	2.35	4,379
1986	2,066	2.53	5,230
1987	1,963	2.48	4,862
1988	1,939	2.40	4,650
1989 AUG	2,050	2.56	5,251
<b><u>Barley</u></b>			
1980	159	0.74	118
1981	222	0.71	158
1982	222	0.71	157
1983	263	0.70	185
1984	200	0.70	139
1985	190	0.69	132
1986	193	0.78	150
1987	182	0.74	134
1988	145	0.77	112
1989 AUG	170	0.76	130

AUGUST 1989

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Table 14 (Continued)

## PAKISTAN GRAIN PRODUCTION 1980-1989

<i>Commodity</i>	<i>Area</i> (1000 Hectares)	<i>Yield</i> (Tons/Hectare)	<i>Production</i> (1000 Tons)
<u><i>Corn</i></u>			
1980	744	1.27	946
1981	740	1.26	930
1982	790	1.27	1,005
1983	798	1.27	1,013
1984	808	1.27	1,028
1985	805	1.25	1,009
1986	816	1.36	1,111
1987	856	1.32	1,127
1988	874	1.32	1,150
1989 AUG	875	1.37	1,200
<u><i>Millet</i></u>			
1980	406	0.53	214
1981	559	0.49	272
1982	438	0.50	220
1983	464	0.49	226
1984	460	0.50	230
1985	460	0.50	230
1986	460	0.50	230
1987	324	0.71	230
1988	460	0.50	230
1989 AUG	460	0.50	230
<u><i>Sorghum</i></u>			
1980	393	0.59	230
1981	399	0.56	225
1982	390	0.57	222
1983	391	0.57	222
1984	395	0.58	230
1985	371	0.59	218
1986	399	0.59	235
1987	320	0.57	181
1988	380	0.55	210
1989 AUG	395	0.58	230
<u><i>TOTAL GRAINS</i></u>			
1980	10,559	1.62	17,054
1981	10,878	1.67	18,208
1982	11,041	1.64	18,081
1983	11,312	1.69	19,073
1984	11,187	1.56	17,482
1985	11,092	1.59	17,671
1986	11,297	1.85	20,878
1987	11,351	1.63	18,554
1988	11,106	1.71	19,027
1989 AUG	11,530	1.85	21,341